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VOL. XIV. NO. 13.

JULY 1, 1886.

PEACE ON EARTH
GOOD WILL TO MEN



CLEANING IN BEE CULTURE

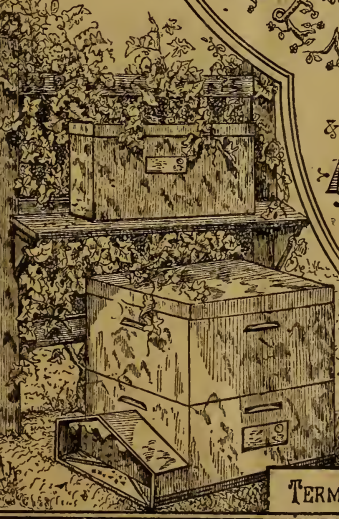
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TO
BEEKEEPING

& HOME INTERESTS.
MEDINA, OHIO
BY
A. BOOT

TERMS, ONE DOLLAR PER YEAR.

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D. G. Perry



ADVERTISEMENTS.

We require that every advertiser satisfy us of responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them. Patent-medicine advertisements, and others of a like nature, can not be inserted at any price.

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We will send GLEANINGS—
With the American Bee-Journal, W'y (\$1.00) \$1.75
With the Bee-keepers' Magazine, (1.00) 1.75
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[Above Rates include all Postage in U. S. and Canada.]



You can not look over the back No's of GLEANINGS or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—"Dear me, what a bother—I must have last month's Journal and it is nowhere to be found"? Put each No. in the Emerson Binder as soon as it comes, and you can sit down happy, any time you wish to find anything you may have previously seen, even though it were months ago.

Binders for GLEANINGS (will hold them for one year), gilt lettered, for 60 cts.; by mail, 12 cts. extra. Ten, \$5.00; 100, \$45.00. Table of prices of Binders for any Periodical, mailed on application. Send in your orders. A. I. Root, Medina, Ohio.

The Canadian P. O. authorities refuse to receive these through the mails, as they exceed the proper weight for merchandise.

FLAT-BOTTOM COMB FOUNDATION.



High side-walls, 4 to 14 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS.

5tf Sole Manufacturers,
SPROUT BROOK, MONT. CO., N. Y.

CHICKENS. S. S. Hamburgs, B. Leghorns, P. Rocks; eggs, \$1.00 per setting for the rest of the season. Fowls for sale.

11tfdb A. H. DUFF, CREIGHTON, OHIO.

Cash for Beeswax!

Will pay 20c per lb. cash, or 25c in trade for any quantity of good, fair, average beeswax, delivered at our R. R. station. The same will be sold to those who wish to purchase, at 26c per lb., or 30c for best selected wax.

Unless you put your name on the box, and notify us by mail of amount sent, I can not hold myself responsible for mistakes. It will not pay as a general thing to send wax by express.

A. I. Root, Medina, Ohio.

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines last winter 50 chaff hives with 7 inch cap, 100 honey racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee hives, etc., to make and we expect to do it all with this Saw. I will do all you say it will."

Catalogue and Price List Free. Address W. F. & JOHN BARNES, 68 Ruby St., Rockford, Ill.

When more convenient, orders for Barnes' Foot-Power Machinery may be sent to me. A. I. Root. 2ttf



RUBBER STAMPS

DATING, ADDRESSING, BUSINESS, LETTER HEADS, ETC.



No. 1.



No. 3.



No. 2.

self and all who do business with you a "world of trouble." I know, you see.

We have those suitable for druggists, grocery-men, hardware dealers, dentists, etc. Send for circular. A. I. Root, Medina, O.

Address only, like No. 1, \$1.50; with business card, like No. 2, \$2.00; with movable months and figures for dating, like No. 3, \$3.00. Full outfit included—pads, ink, box, etc. Sent by mail postpaid. Without ink and pads, 50 cts. less.

Put your stamp on every card, letter, paper, book, or anything else that you may send out by mail or express and you will save your

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KIND WORDS.

U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF ENTOMOLOGY,

APICULTURAL STATION,

N. W. McLain, Agent in charge.

Aurora, Ill., June 25, 1886.

Mr. A. I. Root, Medina, Ohio:—

DEAR SIR:—Please accept my thanks for the copy of GLEANINGS kindly sent to my address here, and for the kindly mention of my work and the favorable indorsement of the same, which you have been good enough to make. It is my intention to do my duty under my instructions, and to serve the bee-keeping industry to the extent of my ability. The aid and encouragement received from those in whose interest this Station was established is appreciated, and is of great service.

I remain very truly yours, N. W. McLain.

ITALIAN & CARNIOLAN QUEENS.



Bred in separate apiaries, away from other bees. Warranted Italian or untested Carniolan queens, in May, \$1.25; 6, \$6.75; June, \$1.10; 6, \$5.90; July, \$1; 6, \$5. State which you prefer, Italians or bred from my *Bellinzona strain*, or *Golden Italians*. I am prepared to please all.

BEES AT REDUCED RATES.

For full particulars, and prices of tested queens, bees, etc., send for circular and price list. Satisfaction guaranteed. CHAS. D. DUVALL,
914db Spencerville, Mont. Co., Md.

SPECIAL OFFER.

After this date I will furnish untested queens for 75 cts. each, \$4.00 per 1/2 doz., or \$7.50 per doz. Tested, \$1.50. Warranted queens at \$1.00; 2-frame nuclei, with untested queen, at \$2.00. Ref., A. I. Root.
Address A. B. JOHNSON,
12d Clarkton, Bladen Co., N. C.

WANTED.—A partner to take half-interest in an Apiary, with a little capital. Address
LOUIS WERNER, Edwardsville, Ill.

MY 13TH ANNUAL PRICE LIST OF ITALIAN, CYPRIAN, AND HOLY-LAND BEES, QUEENS, NUCLEUS COLONIES, and APIARIAN SUPPLIES, sent to all who send me their name and address.
10 11td H. H. BROWN, Light Street, Col. Co., Pa.

HAVING moved my large queen-rearing apiary from Lewisville to Milton, I will still furnish pure Italian bees and Queens in any quantity and shape. Those wanting to start apiaries should write for prices. I also will furnish eggs from California bronze turkeys, at \$1.50 per sitting of 9.
3-19d GEO. W. BAKER, Milton, Ind.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or \$2.00 per annum, when given once a month, or \$4.00 per year if given in every issue.

\$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or \$2.00 per year.

Those whose names appear below agree to furnish Italian queens for \$1.00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind, that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with * use an imported queen-mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for \$1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.

*H. H. Brown, Light Street, Columbia Co., Pa. 1td

*Paul L. Viallon, Bayou Goula, La. 13td

*S. F. Newman, Norwalk, Huron Co., O. 13td

*Wm. Ballantine, Mansfield, Rich. Co., O. 13td

*D. G. Edmiston, Adrian, Len. Co., Mich. 11td

*S. G. Wood, Birmingham, Jeff. Co., Ala. 13td

*E. Kretschmer, Coburg, Mont. Co., Iowa. 11td

D. McKenzie, Camp Parapet, Jeff. Parish, La. 13td

Ira D. Alderman, Taylor's Bridge, Samp. Co., N. C. 13td

*Jos. Byrne, Ward's Creek, East Baton Rouge

11td Par., La.

J. W. Winder, Carrollton, Jeff. Par.,

New Orleans, La. 3td

*E. Burke, Vincennes, Knox Co., Ind. 3-1

Richard H. Bailey, Ausable Forks, Essex Co., N. Y. 5-15

S. M. Darrah, Chenoa, McLean Co., Ill. 7-17d

S. H. Hutchinson & Son, Claremont, Surry Co.,

7-17d Va.

*N. E. Cottrell, Burdick, Porter Co., Ind. 7-17d

Peter Brickley, Lawrenceburg, And. Co., Ky. 9td

C. C. Vaughn, Columbia, Tenn. 9td

*J. W. Kieran, S. E. cor. Mason and Moulton St.,

Bloomington, Ill. 9td

D. A. McCord, Oxford, Butler Co., O. 9-19d

H. J. Hancock, Siloam Springs, Benton Co., Ark. 9td

W. S. Ward, Fuller's Station, Albany Co., N. Y. 1315d

*Chas. McClave, New London, Ohio. 13d

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.

P. L. Viallon, Bayou Goula, Iberville Par., La. 1td

C. W. Costellow, Waterboro, York Co., Me. 1-23

Kennedy & Leahy, Higgsinsville, Laf. Co., Mo. 23td

E. Kretschmer, Coburg, Montgomery Co., Ia. 23td

\$2.50 CHEAP \$2.50

During the rest of the season I will sell three Simp.-size frame nuclei colonies, all worker comb, with 1 lb. of Italian bees, and nice tested Italian queen, for only \$2.50. Safe arrival and satisfaction guaranteed. I have for sale a fine lot of untested queens at 75c; tested, \$1.00. Send for circular.
12-13d F. W. MOATS, THE BEND, DEFIANCE CO., OHIO.

QUEENS UNEXCELLED.

From Mr. Benton's best imported mothers, very low. Send for circular to
8tdfb S. F. REED, N. Dorchester, N. H.

ITALIAN QUEENS

TESTED, \$2.00; UNTESTED, \$1.00.

MISS A. M. TAYLOR,
12tfdb MULBERRY GROVE, BOND CO., ILL.

1880.

1886.

Headquarters in the North.

Steam factory, fully equipped, running exclusively on **BEE-KEEPERS' SUPPLIES**. White-poplar and basswood one-piece and dovetailed sections. Vandervort thin foundation. Send for free samples and illustrated price list.

10-15db **A. D. D. WOOD,**
Rives Junction, Jackson Co., Mich.

MUTH'S

HONEY-EXTRACTOR,
SQUARE GLASS HONEY-JARS,
TIN BUCKETS, BEE-HIVES,
HONEY-SECTIONS, &c., &c.
PERFECTION COLD-BLAST SMOKERS.

Apply to **CHAS. F. MUTH & SON,**
CINCINNATI, O.
P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keepers."
1tfdb

APIARY FOR SALE.

90 COLONIES, in splendid condition; 20 acres land, large new frame house, 70 new hives, 12,000 4½x4¼ sections, tools, etc. One of the best honey-producing localities in the State of Iowa. Immediate possession.
C. A. SAYRE,
10tfdb Sargent, Floyd Co., Iowa.

QUEENS, 1886. UNTESTED;

From select imported mother. After May 15, \$1.00. Wax worked into fdn. for a share, or by the pound. Satisfaction guaranteed.
THOS. & BENJ. YOUNG,
10-15db LA SALLE, LA SALLE CO., ILL.

BEE-HIVES,

One-Piece Sections, Section Cases, Frames, &c.,
OF SUPERIOR WORKMANSHIP, FROM
SMITH & GOODSELL,
Manufacturers of and Dealers in
APIARIAN SUPPLIES,
ROCK FALLS, WHITESIDE CO., ILL.
3tfdb Send for Price List.

CARNIOLAN

QUEENS & BEES A SPECIALTY.

Send for Descriptive Price List and Circular.

9tfdb **H. F. SHANNON,** Clarksburg,
(Formerly of Spring Hill) Decatur Co., Ind.

F. HOLTKE'S 3-FRAME NUCLEI, WITH \$1.00 QUEEN, FOR ONLY \$2.00!

Three-frame nuclei, with \$1.00 queen; from 15th of May on, \$2.00.—Combs built in Simplicity frames, and well stocked with bees and brood. 10-11-13d
Fred. K. Holtke, Carlsstadt, Bergen Co., N. J.

SOUTHERN HEADQUARTERS FOR EARLY QUEENS,

Nuclei, and full colonies. The manufacture of hives, sections, frames, feeders, foundation, etc., a specialty. Superior work and best material at "let-live" prices. Steam factory, fully equipped, with the latest and most approved machinery. Send for my illustrated catalogue. Address

5tfdb **J. P. H. BROWN,** Augusta, Ga.

HARRINGTON'S AD. BEES CHEAP!

I have the finest lot of Queens and Bees I have ever raised in my 13 years' experience, and should like to have everybody see them. I will sell at following low prices:

SELECT TESTED (VERY FINE) \$2.00
TESTED 1.00

My Queens are nearly all mated with drones from an imported Italian Queen. Half-blood Holy-Lands, Cyprians, and Albino, at same price.

H. B. HARRINGTON,
May 26, 1886. Medina, O.

BEAUTIFUL FOUNDATION

And very choice all-in-one-piece **SECTIONS**, V-groove—wholesale and retail, and exceedingly cheap. Send for Samples and Free Price List of every thing needed in the apiary. 6tfdb
(Near Detroit.) **M. H. HUNT,** Bell Branch, Wayne Co., Mich.

Bee-Hives, Honey-Boxes, Sections.

LARGEST BEE-HIVE FACTORY IN THE WORLD.

CAPACITY, 1 CARLOAD OF GOODS PER DAY

Best of goods at lowest prices. Write for Price List. 1tfdb **G. B. LEWIS & CO.,**
Watertown, Wis.

BEES BY THE POUND, AND UNTESTED QUEENS A SPECIALTY.

One pound of Bees, \$1.00. Queens, \$1.00 each. Express charges prepaid on orders of 10 lbs., to any part of the United States except California and Oregon. Write for discount on large orders. Orders from dealers for a weekly delivery of queens solicited. Safe arrival and satisfaction guaranteed. Make money orders, drafts, etc., payable at Baton Rouge, La. **JOS. BYRNE,**
7tfdb WARD'S CREEK, EAST BATON ROUGE PAR., LA.

PURE ITALIAN QUEENS.

100 READY EVERY 30 DAYS.

Untested at 75 cents; 10 for \$7.00. Tested queens, \$2.00 each. All bred from a selected imported mother. Cells raised in full colonies. 10tfdb **D. G. EDMISTON, ADRIAN, LEN. CO., MICH.**

SEE WHAT THIS IS.

Two-frame nuclei of the finest strain of Italian bees; combs full of brood, strong in bees, with an extra select tested queen, for \$2.50. Three frames, \$3.00, or two for \$5.00. The frames are L. size. Satisfaction guaranteed. **J. A. BUCHANAN,**
12tfdb Holliday's Cove, Hancock Co., W. Va.

BEE-HIVES

—AND—

ITALIAN QUEENS

After June 15th, queens, \$1.00; 6 for \$5.00; 12 for \$9.00. Bees by the pound, same as queens.

No. 1, all-in-one-piece sections, 4½x4¼x1½, and 1¾, per 1003, \$4.00; 10,000 for \$37.50.

B. J. MILLER & Co.,
12-13d NAPPANEE, ELKHART CO., IND.

DADANT'S FOUNDATION

is asserted by hundreds of practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenest, and neatest, of any that is made.

It is kept for sale by Messrs. A. H. Newman, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; F. L. Dougherty, Indianapolis, Ind.; Chas. H. Green, Berlin, Wis.; Chas. Hertel, Jr., Freeburg, Ill.; Ezra Baer, Dixon, Lee Co., Ill.; E. S. Armstrong, Jerseyville, Illinois; Arthur Todd, 1910 Germantown Ave., Phil'a, Pa.; E. Kretschmer, Coburg, Iowa; Elbert F. Smith, Smyrna, N. Y.; D. A. Fuller, Cherry Valley, Ill.; Clark Johnson & Son, Covington, Kentucky; J. B. Mason & Sons, Mechanic Falls, Maine; C. A. Graves, Birmingham, O.; M. J. Dickason, Hiawatha, Kan.; J. W. Porter, Charlottesville, Albemarle Co., Va.; E. R. Newcomb, Pleasant Valley, Dutchess Co., N. Y.; J. A. Humason, Vienna, O.; G. L. Tinker, New Philadelphia, O.; J. M. Shuck, Des Moines, Ia.; Aspinwall & Treadwell, Barytown, N. Y.; Barton, Forsgard & Barnes, Waco, McLennan Co., Texas. W. E. Clark, Oriskany, N. Y., and numerous other dealers.

Write for samples free, and price list of supplies, accompanied with 150 Complimentary and unsolicited testimonials, from as many bee-keepers, in 1883. We guarantee every inch of our foundation equal to sample in every respect.

CHAS. DADANT & SON,

3btfdb **Hamilton, Hancock Co., Illinois.**

Batchelder's Drone and Queen Trap

Is the only one made that does not hinder the bees in their work. Send 85 cents for sample. Send for circular, and see what A. I. Root says about it.

10tfdb **J. A. BATCHELDER, Keene, N. H.**

THE CANADIAN BEE JOURNAL.

WEEKLY, \$1.00 PER YEAR.

JONES, McPHERSON & CO., Publishers, Beeton, Ontario, Canada.

The only bee journal printed in Canada, and containing much valuable and interesting matter each week from the pens of leading Canadian and United States bee-keepers. Sample copy sent free on receipt of address. Printed on nice toned paper, and in a nice shape for binding, making in one year a volume of 82 pages.

9tfb

REDUCTION IN PRICES.

We hereby notify our customers that there is a reduction in foundation from the prices quoted in our March retail price list. All parties interested will please mail us a card for new prices.

CHAS. DADANT & SON,

11ld **Hamilton, Hancock Co., Ill.**

Italian Queens sent by Mail.

Untested queens from imported mother, April, \$1.25; May, June, and July, \$1.00. After April, per half-dozen, \$5.00. **E. CRUDGINGTON & SON,**

6tfdb **Breckinridge, Stephens Co., Texas.**

SECTIONS.

Western headquarters for bee-men's supplies. Four-piece sections, and hives of every kind, a specialty. Flory's corner-clamps, etc.. Orders for sections and clamps filled in a few hours' notice. Send for sample and prices.

M. R. MADARY,

22 21db **Box 172, Fresno City, Cal.**

Foundation - Mill For Sale.

One ten-inch Root comb-mill, second hand. The mill has, however, been completely fitted up, painted, and varnished, and is, to all appearances, both in looks and quality of work, equal to a new one. Price \$15.00. The list price of a new mill of this kind is \$20.00.

A. I. ROOT, Medina, O.

CARNIOLAN QUEENS.

Having located an apiary of this new race of bees in an isolated place, surrounded by high mountains, where a honey-bee was never seen until we placed these there, we have two of the finest queens Mr. Benton could furnish to breed from, and can furnish queens of undoubted purity at the following prices:

June 1, Queen, \$3 50; ½ dozen, - - -	\$18 00
July 1, " 3 00; " - - -	15 00
Aug. 1, " 2 50; " - - -	12 00
Sept. 1, " 2 25; " - - -	10 50

ITALIAN * QUEENS

of the best strains, bred in a separate apiary, 40 miles distant, warranted purely mated:

June 1, Queen, \$1 00; ½ dozen, - - -	\$5 00
July 1, " 1 00; " - - -	5 00
Aug. 1, " 1 00; " - - -	4 50

Address **J. B. MASON & SONS,**
MECHANIC FALLS, ME.

600 LBS. OF BEES ON HAND YET.

Bees, \$1.00; queens, black or hybrid, when I have them, 25 cents. Queens raised from imported mothers, after July 1, 65 cts. by mail; 50 cts., with 1 lb. of bees by express, charges paid by me, as in May.

THOMAS GEDYE,

12tfdb **La Salle, La Salle Co., Ill.**

SIX WARRANTED ITALIAN QUEENS

\$ for \$5.00; twelve for \$9.00. Single queen, \$1.00. Tested, \$1.50 each. Simplicity sections, \$3.75 per 1000, first quality.

I. R. GOOD, Nappanee, Ind.

12tfdb

FOR SALE AT COST.

200 1½-story Simplicity hives in flat; 40,000 one-piece one-pound sections; 75,000 one-piece 2-lb. sections, size 5¼x6; 10,000 brood-frames, V-shape; 5,000 broad frames for sections; 250 1½-story Simplicity hives, nailed and painted.

Address **R. L. SHOEMAKER,**

12 13d **Newcomerstown, Tuscarawas Co., O.**

ITALIAN AND ALBINO QUEENS.

Choice tested Italian queens, reared from a select imported queen, Root's importation, \$1.50 each. Warranted, \$1.00 each; six for \$5.00. Albinos same price as Italian. Safe arrival and satisfaction guaranteed. Make money orders payable at Salem, O.

F. H. SCATTERGOOD, P. N.,

12 13d **Winona, Ohio.**

HEADQUARTERS IN THE SOUTH

FOR THE MANUFACTURE AND SALE OF

BEE - KEEPERS' * SUPPLIES.

The only Steam Factory Erected in the South, Exclusively for the Manufacture of Hives, Frames, Sections, etc. The Viallon and Root Simplicity Hives a Specialty.

ITALIAN QUEENS,

Untested, in April, \$1.25 each; \$13.00 per doz. From May 5 to June 1, \$1.10 each, \$12.00 per doz. After June 1, \$1.00 each, \$10.00 per doz. Tested, \$2.50 each; select tested, \$3.00 each to first of June. Contracts taken with dealers for the delivery of a certain number of queens per week, at special figures.

FOUR-FRAME NUCLEUS,

With pure Italian queen, containing 3 pounds of bees when received; in April, \$4.00; after May 25, 25 cts. less. Safe arrival and satisfaction guaranteed.

For more particulars, send for catalogue for 1886.

P. L. VIALLON,

11tfdb **Bayou Goula, Iberville Parish, La.**

HONEY COLUMN.

CITY MARKETS.

CHICAGO.—Honey.—Very little good comb honey on the market. A few lots of new have come forward and sold at 15@16c per lb. Extracted unchanged. *Beeswax*, 25c. R. A. BURNETT,
June 22, 1886. 161 So. Water St., Chicago, Ill.

CINCINNATI.—*Honey.*—Demand for extracted honey has been very slow of late, but seems to be improving gradually for manufacturing purposes. There is much honey in the hands of commission merchants, and prices are very low in consequence thereof; 3½@7c per lb. is the range of prices on arrival. Prices of comb honey are nominal. *Beeswax.*—Arrivals are good, and demand is fair. We pay 18@22c per lb. for fair to choice yellow.

CHAS. F. MUTH & SON,
S. E. Cor. Freeman and Central Avenues,
June 22, 1886. Cincinnati, Ohio.

ST. LOUIS.—Honey.—Receipts of new honey are becoming quite liberal, and the market somewhat depressed. *Comb*, 12½@14. Extracted in cans, choice, 8c; extracted in bbls., 5c for good.
June 23, 1886. W. T. ANDERSON & Co.,
104 N. 3d St., St. Louis, Mo.

CLEVELAND.—Honey.—The market continues very quiet; some new white clover has been received, and best 1-lb. sections are selling at 14c; old 1-lb., 13c; old 2-lbs., 10@11. Glassed sections are unsalable. *Evt.*, 6@7c. *Beeswax*, 22c. A. C. KENDEL,
June 21, 1886. 115 Ontario St., Cleveland, Ohio.

KANSAS CITY.—Honey.—The honey market is bare of comb honey. The demand is very good, at fair prices. We have reports of a good yield everywhere. 1-lb. comb, 14@16c; 2-lb. comb, 12@13 for white clover. Dark, 1-lb., 10@12; 2-lb., dark, 9. Extracted, choice white clover and sage, 5@6 cents; dark, 3@3½, and no sale. *Beeswax*, 20@22. New white clover, in one and two pounds, begins to come in.

CLEMONS, CLOON & Co.,
June 21, 1886. Cor. 4th & Walnut St's.,
Kansas City, Mo.

BOSTON.—Honey.—No change in the price of honey. Sales slow. BLAKE & RIPLEY,
June 19, 1886. 17 Chatham St., Boston, Mass.

DETROIT.—Honey.—There is a little new comb honey in the market, and the best white is selling at 13c. The demand, however, is limited. *Beeswax*, prime at 25c. M. H. HUNT,
June 21, 1886. Bell Branch, Mich.

FOR SALE.—1000 lbs. of new white clover honey, 7c per lb. Ripe, and A No. 1 in quality.
J. B. MURRAY, Ada, Ohio.

FOR SALE.—New clover honey in kegs, at 8c per lb., kegs included; also in comb, stored in 1-lb. sections, a fine article, 16c per lb., put up in small cases. O. H. TOWNSEND, Alamo, Kal. Co., Mich.

FOR SALE.—2000 lbs. white-clover honey in new 75-lb. tin cans. Delivered on board cars here. \$5.00 per can, can included. Honey of this year's crop. Satisfaction guaranteed. N. MURRAY,
Ada, Hardin Co., Ohio.

HARD-TIME PRICES IN JULY.

Two-frame nuclei of Italian bees, with \$1.00 queen, \$2.00. If a larger nucleus is wanted, add 50 cts. for each additional frame. Full colony, in A. I. Root's Simplicity hive, \$4.50. Pure Poland-China pigs for sale. My pigs are from prize-winning stock, and are second to none. No fancy prices asked. I will guarantee safe arrival and entire satisfaction on both bees and pigs. Address N. A. KNAPP,
13d Rochester, Lorain Co., Ohio.

WANTED—Reliable local and traveling salesmen to sell Lubricating Oils. E. F. DIETERICHS, Cleveland, O. Inclose stamp for reply, and mention GLEANINGS.

IF you want fine honey-gatherers, try J. P. Moore's strain of Italians. See "ad."

CARNIOLAN * QUEENS.

Carniolans are the Gentlest Bees Known,
AND EQUAL TO ANY OTHER RACE FOR WORK.

THE QUEENS ARE THE MOST PROLIFIC.

I offer daughters, of Imported Benton Carniolan queen, raised in my apiary of 40 colonies of pure Carniolan bees, during the remainder of this season, \$1.00 each; six, \$5.00.

DR. S. W. MORRISON,
Oxford, Chester Co., Pa.

For Sale. COLONIES, NUCLEI, and QUEENS, AT LOWEST PRICES.

11-16db GEO. D. RAUDENBUSH, READING, PA.

Red-Clover Italians.

For the past month, Moore's Italians have been roaring away on a large field of red clover. Reduced prices: Warranted queens, each, 80 cts.; per half doz., \$4.50. Safe arrival and satisfaction guaranteed. See ad. in June 1st number. Circular, giving full particulars, free. J. P. MOORE,
13d Morgan, Pendleton Co., Ky.

NOW READY, ITALIAN QUEENS.

1 queen, \$1.00; 2, \$1.80; 3, \$2.50; 5, \$3.75. Bees by the pound, nucleus, and colony. 13-15db
L. T. HOPKINS, Conway, Franklin Co., Mass.

I WILL ship full colonies of Italian bees during July, August, and Sept., in Simplicity hives, with a wire-cloth cover and bottom, combs straight, bees in good condition, for \$4.25. Hybrids in same hives and in same condition, and No. 1 honey-gatherers, also gather honey from red clover, \$4.00. Reason for selling so cheap is, I have too much work to tend to so large a lot of bees. I guarantee safe arrival by express. H. M. MOYER,
13d Hill Church, Berks Co., Pa.

QUEENS. I have 50 dollar queens laying now; can ship by return mail sure.

13d L. HEINE, Bellmore, Queens Co., N. Y.

LOOK HERE, BEE-KEEPERS.

COMB FOUNDATION. Wax worked into Vandervort fdn. on shares, or by the pound, at 12½ and 15 cts. per lb. Brood fdn., 43 cts. per lb.; surplus, 50 cts. per lb. Also strawberry-plants, the best of varieties, at \$1.00 per 100. Orders filled promptly. C. H. McFADDIN,
13d Box 35, Clarksburg, Moniteau Co., Mo.

UNTESTED ITALIAN QUEENS, reared under swarming impulse, \$1.00 each; 3 for \$2.50; 6 for \$4.50. Tested, \$1.50 each. Safe arrival guaranteed. F. S. McCLELLAND,
13d Box 379, New Brighton, Beaver Co., Pa.

KENTUCKY QUEENS. Italians, Holy-Land, and Albinos. Tested, \$2.00; untested, \$1.00 each. Bees, 75c per pound after 15th July. PELHAM & WILLIAMS,
13-16db Maysville, Ky.

A. J. KING'S New Circular of **CARNIOLAN, A. SYRIAN, and ITALIAN QUEENS**, etc., will be **SENT FREE** on application. Address 13tfdb A. J. KING, 51 Barclay St., New York.

FLORIDA PALMETTO FANS,

By mail, postpaid, 75 cts. Send money by registered mail. W. H. STEACY, BOX 20, THENOTOSASSA, FLA. 13-14d

ITALIAN BEES IN IOWA.

60c to 85c per lb. Queens, 30c to \$1.75, according to kind and time. Also bee-supplies and honey. Order from free circular. "How to Raise Comb Honey," an illustrated pamphlet, just out, price 5 cents. Address OLIVER FOSTER,
13tfdb Mt. Vernon, Linn Co., Iowa.

CHEAP!

Full colonies in Simplicity hives, and honey enough to winter, for only \$4.50. Will ship last of July. DAN WHITE,
11tfdb NEW LONDON, HURON CO., OHIO.



Vol. XIV.

JULY 1, 1886.

No. 13.

TERMS: \$1.00 PER ANNUM, IN ADVANCE; 2 Copies for \$1.90, 3 for \$2.75; 5 for \$4.00; 10 or more, 75 cts. each. Single Number, 5 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

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A. I. ROOT, MEDINA, OHIO.

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NOTES FROM THE BANNER APIARY.

No. 79.

CLEANING HONEY-BOARDS.

AS I have mentioned before, the only objection that I have to the wooden queen-excluding honey-boards is, that the bees fill the holes with propolis and wax. They are more inclined to do this when but little honey is being brought in. I have just been cleaning about 50 of them. I took a piece of hard wood, two inches wide, $\frac{1}{4}$ inch thick, and seven or eight inches long. One end of this was carefully planed down upon the sides until it was exactly $\frac{1}{32}$ thick. This thin end was placed over an opening that was filled up, and the upper end given a light rap with a hammer, which clears the hole pretty effectually. To prevent the stick going through too far, a nail is driven through it half an inch from the lower end. The honey-board is supported by placing it upon two Heddon cases set upon the floor, perhaps four or five inches apart; but this operation did not free the holes so completely as I could wish, as there seemed to be a little wax adhering to the sides. To remove this, a ten-penny nail was fastened into a bit-stock, thrust into each opening, and turned slightly until the corners scraped the sides of the hole as it was passed from one end to the other of the slot. This cleaned them out completely. I have been making some honey-boards like Tinker's; that is, they are similar to the Heddon slot honey-board, except that the edges of the slats are grooved with a fine saw, and strips of perforated zinc slipped in between the slats. They cost a trifle less than

an all-zinc board; have the desirable rigidity so necessary for keeping the bee-spaces exact, and I do not think the bees will fill the holes any more than they would in an all-zinc board.

SWARMING-OUT MANIA.

I have never had bees "act so" about staying in their hives after being hived, as this season. I do not know to what to attribute it, unless it be the light flow of honey that characterized the fore part of the season. Don't say it was because they didn't like the new Heddon hive, as all were not hived in that; in fact, the two swarms that gave the most trouble (one coming out four and the other five times) were hived in the old style of Heddon hive. I thought it might be caused by contracted brood-chambers, until two swarms re-swarmed that did not even fill the brood-chamber—swarms that had no business to have swarmed in the first place, as they were not strong enough, and swarmed, I suppose, simply because their neighbors did. As the honey-flow improved, so did the behavior of the bees; still, an occasional swarm "acts up." After we had lost three swarms by their "going west" (every one went west), preconceived notions were tossed to the winds, and we fell to

CLIPPING THE QUEENS' WINGS.

The first swarm came out and left early in the season—so early that we didn't expect it. It kindly came up past the house, though, to say "good-by," but too high above us to "shake hands." The second swarm left in spite of the combined efforts of two whole families. Brother and I followed it about a mile, and our wives and the twins followed us, or tried to follow us, with pails of water; and when we returned, tired, hot, disgusted, chagrined, and

unsuccessful, it was decided, by vote, that every queen should have her wing clipped. These \$5.00 arguments in favor of clipping were becoming too numerous. But we finally reconsidered, and decided to wait until the bees swarmed, and then find the queen, and clip their wings, which we have done. So expert have we become in catching queens that we catch most of them as they leave the hive. A queen seldom takes wing the moment she reaches the entrance of the hive, but usually drops on the ground about a foot in front of the hive, remains there from one to five seconds, then slowly rises and flies. We have sometimes caught them in our hands after they had risen to fly. If the queen is not found as the swarm is issuing, the swarm is shaken into a basket, the edge of the basket placed at the entrance of the hive, when the bees will begin to crawl in and to spread out over the inside of the basket. As the basket is lined with white cloth there is not much difficulty in finding the queen. One of us is in the apiary from between seven and eight in the morning until between four and five in the afternoon, yet one colony cast a swarm when we didn't know it, and we didn't discover it until it cast a second swarm, when the "brand-new" look of the queen aroused our suspicions, and investigations followed. I have never had more than 75 colonies, spring count; and with an apiary of that size, I should prefer not to have the queens clipped, if the bees would stay hived, and they usually have until this season; but in a large apiary it has always seemed to me as though several swarms issuing at once would give much trouble unless the queens were clipped. The best remedy that I can suggest would be to have several small tents scattered about the yard; and if a swarm is seen at the outset, set a tent over it until the swarm in the air is cared for. We have used our tent in that way several times this season, and it works like a charm.

REVERSAL PREVENTING SWARMING.

None of our colonies that we have been practicing reversing upon have yet swarmed; but as the number is limited, and they may yet swarm, I do not consider it a fair test, and I mention it only that others who are trying reversing may also notice in regard to the matter. At present I do not care to prevent the issuing of first swarms; but many bee-keepers would be glad to know that inverting a hive once a week would prevent its occupants from swarming.

W. Z. HUTCHINSON.

Rogersville, Mich., June, 1886.

You will notice, friend H., that friend Alley, on another page, strikes on the point you mention; viz., that reversing the brood-chamber will have a tendency to prevent swarming. This is quite an important matter, and we shall be glad to have reports from those who have tested it to see. I believe it is true, that many colonies are induced to swarm because they hear their neighbors swarming; and this sometimes gets to be quite a serious trouble, especially where the owner of the apiary wishes to secure comb honey. I believe most of our veterans own up defeated at such times. Friend Hasty, you will remember, during one season could discover no other way to cure the swarming than to bury the truants for two or three days in the ground.

EMPTY FRAMES, EMPTY COMBS, OR FOUNDATION?

FRIEND HUTCHINSON TELLS US WHICH, UNDER CERTAIN CIRCUMSTANCES, AND GIVES THE WHYS AND WHEREFORES.

IN the *Canadian Bee Journal* for May 26, p. 169, occurs the following query:

In the honey season, if I had three first swarms come off within a few minutes of each other, and I were to put one in an empty hive, another in a hive filled with foundation, and the third filled with worker-combs, each swarm weighing 6 lbs., how much extracted honey would each yield in the first ten days? W. M.

We have not space for the answers to this query; but friend W. Z. Hutchinson writes so valuable an article in regard to the matter, on page 249 of the *C. B. J.* for June 23, that we give place to it below:

I was much interested in query No. 75, asking which swarm would store the most extracted honey the first ten days after hiving, one hived in an empty hive, one given foundation, or one given empty combs.

I wish that the query had been put in a little different form. Modern apiculture has divided a beehive into two radically different apartments—brood-nest and surplus-department. Of course, the brood-nest can be made so large as to allow room for the honey as well as the brood; but most apiarists now prefer to have the brood by itself, and the honey by itself. In view of this I should like to put the query something like this: If the brood-chamber of one hive is furnished with foundation, another with empty combs, and a third with empty frames, swarms exactly alike are hived at the same time in these hives, while the surplus apartments are furnished with foundation, or empty combs, which surplus-apartment will contain the most honey (either comb or extracted) at the expiration of ten days, or at the end of the season, and which brood-nest will contain the most brood? The bees are to be given access to the surplus at the time of hiving, and the brood-chamber must be of such a size that the bees must, of necessity, also occupy the surplus-apartment. Unless empty combs are used, a queen-excluding honey-board will be needed.

According to experiments which I have made during the past two years, the swarm that builds its combs in the brood-nest will store the most honey in the surplus apartment, and have the most brood in the brood-nest; next will come the swarm given foundation, while the swarm with empty combs will put the least honey in the super and rear the least brood. The experiments that I have made consisted of hiving one swarm on empty combs, the next on empty frames, and the third on foundation, continuing in this way until about 40 swarms had been hived each year.

When combs are given, the bees proceed at once to fill them with honey, which in good honey weather they will often do in two days. In this way they get the start of the queens, and they keep it. I can not tell why it is; perhaps the bees feel that their job is finished; but after filling a set of combs in the brood-nest, bees are very reluctant to commence in the boxes. Where they store their first honey after being hived, there they seem willing to continue to store it; and when foundation is given in the brood-nest, and combs in the surplus-apartment, the first honey goes into the super, as no honey can be stored in the brood-nest until the foundation is drawn; but in two days, foundation becomes comb, and then the bees will store considerable honey in the brood-nest; but they will continue to work in the supers, as they have made a start there. When hived upon empty frames, and given combs or foundation in the super, all the honey must be stored in the super until combs can be built in the brood-nest; and just as soon as a few cells are started in the brood-nest, the queen is ready to fill them with eggs; and as soon as the eggs are laid in a comb that is being built, the storing of honey ceases in that comb, as no honey is stored below where brood is started. The queen can keep pace with the building of natural comb, but not with the drawing-out of foundation. When a swarm is hived upon empty frames, and given access at once to a

super, furnished with foundation or combs, the result is that all the honey goes into the super, while the brood-nest is filled with sheets of solid brood. According to the experiments that I made, if the foundation had been given to me it would have been used at a loss when put into the brood-chamber and swarms hived upon it.

At the Detroit convention, Mr. H. R. Boardman said he had tried hiving swarms upon empty frames, and was pleased with the result. Mr. J. B. Hall had also tried it, but too much drone comb was the result. This I attribute to his large brood-chambers.

Mr. Doolittle's article, "Production of Wax," is right to the point. Because bees in confinement require twenty pounds of honey to produce one pound of wax, it does not follow that a new swarm can not build the combs in the brood-nest to better advantage to their owner than to draw out foundation.

Mr. Doolittle speaks of dispensing with foundation because it is expensive. "A penny saved is a penny earned," etc. That is not the question. Beekeepers do not look upon foundation as a *luxury*—something that *could* be dispensed with—but rather a *necessity*. It does not pay to "retrench as much as possible" in the use of *some* things. The question is, "Does it pay to use foundation in the brood-nest when hiving swarms?" If it *does*, where is the economy of allowing bees to build their own combs? If it *pays*, the more we use the larger the profit; and if it *doesn't*, nobody will be fool enough to use it simply for the fun of the thing.

Rogersville, Mich.

W. Z. HUTCHINSON.

After reading the above, a great many things not heretofore plain became all at once easy to understand. For instance: Just before we commenced manufacturing extractors, a neighbor brought me a good-sized swarm of black bees. I had been buying all the bees in the country around, and at prices that enabled our country friends to take a horse and buggy and bring me every swarm as fast as it came off. Well, the swarm mentioned was brought about the middle of July, the owner expecting I would give at least \$5.00 for it. I told him the basswood yield was so near over I could not possibly give over \$2.00; and some of my old bee-friends thought the bees were not worth any thing, because they could not possibly gather honey enough to winter. I had my own ideas in regard to it, however. I gave the bees a full set of combs, and they went right to work, and in two days their combs were almost like lead, the honey sparkling from corner to corner—none of it capped over, of course. To my surprise, not an egg was to be seen, and I began wondering if they were not queenless. I gave them more room, however, but no eggs were found for something like a week. The honey came so fast that the queen didn't have a chance to commence, or perhaps the bees were so eager to improve the time that they couldn't stop to prepare cells for her use. Now, then, friends, had the empty combs I gave the bees been shallow, say four or five inches deep, and had room been provided below for comb-building, the honey would all have gone into these shallow combs. New combs would meanwhile have been built under them, which the queen would have occupied with brood. Thus we see how plain it is that more *honey* will be stored in the sections where the new swarm is given empty frames than if they had empty combs, or even frames filled with foundation. We should be very glad of more experiments on this subject while the season permits.

Of course, this condition of affairs refers to comb honey. Where one is working for

extracted honey, by all means give them empty combs; and if you can not do that, give them empty frames filled with foundation. New swarms will give enormous quantities of extracted honey, if provided with empty combs when first hived; that is, if I am correct in the matter; and I should be very glad indeed to have friend Hutchinson's opinion in regard to this latter—that is, if he has ever tried working new swarms for extracted honey.

INDUCING BEES TO COMMENCE WORK IN THE SECTIONS, ETC.

GLEANINGS AS AN ADVERTISING MEDIUM.

THAT GLEANINGS is a first-class medium for advertising, has been fully proved to myself, while at the same time it has added largely to my labors in the way of answering letters. A few weeks ago, it may be remembered, I gave a method of my own for enticing or forcing bees into sections, by shaving combs in the brood-chamber to $\frac{3}{4}$ inch thick, spacing them just a bee-space apart, and putting on sections at the first approach of the honey season. Well, for the last three weeks letters have been coming to me from various sections in regard to the matter; and, strange to say, every one from persons who had tested, in a small way, the method I described; but it is not at all strange that every one had found the method did work just as I had stated it would. One writer is very enthusiastic over it, saying that, with him, it does a thing that has bothered him for years, and is the only reasonable and easy way of getting bees into sections that he has ever tried. And with myself, I desire to say that it works every time; there are no failures, and there can be none, as if is in direct accordance with the natural habits of the bees, and is only doing with frames just what they do in box hives and hollow trees. It is useless to expect that a frame hive alone, no matter whose patent it may be, will give us good results, without *some* labor on our part. The point is, to do the required labor in the easiest, cheapest, and most natural way, because this will be found the best way. I trust that every one who has written to me will report the results in GLEANINGS and the other journals, so that, if the plan is of any value, the fraternity may all know it, and have the benefit of it. As it can be tested at any time, and with any hive, it will cause no trouble to do so, and the results, I know, will be surprising to any who are at all skeptical.

INTRODUCING QUEENS.

It seems a little strange to me that so many find trouble in introducing queens. I admit, that I once found great trouble myself; but the most of it was caused by over-anxiety. The so-called "Simmins method" is so nearly absolutely safe, however, that the veriest novice would not lose 2 per cent by using it, while the expert will meet with comparatively no loss at all; and if he should, it would be one of those cases where the loss was unavoidable, and would have happened under any circumstances. I use, however, a modification of the "Simmins method," and deem it fully as simple and handy. I have introduced many queens in my way, and never lost one yet. Some of these queens were virgins, but almost all were fertilized. The plan or method I use altogether now is, to remove the old queen,

just after the noon hour on a bright day, when the bees are flying briskly. At dusk of the same day, and after the flying for the day has ceased, I give the colony a little smoke, wait three or four minutes for the bees to fill themselves with nectar, and then let the new queen run directly in at the entrance. I do not open the hive, or trouble it at all for four or five days after the introduction. I have no faith or belief in the "scent" theory; but if any do, they might keep the new queen caged on top the frames for a day or two; but to introduce safely, the new queen must be allowed to enter the hive on the same day the old one is removed, and the hive must not be opened for three or four days. I have not found that it made any difference whether honey was being gathered freely or not; but as possibly this may be owing to the fact that I always feed a little when no honey is being gathered from the fields, it may be advisable, if the attempt to introduce is made during a honey-dearth, to feed enough to keep a colony on its good behavior. I should never attempt to introduce a queen on the day she came from a distance, in any case, but should allow her to remain for a day or two on the frames of some hive, in order that she might get rested from the effects of the journey, and her ovaries be stimulated to their accustomed vigor; and this might as well be done on the frames of the hive she was to be given, as on any other. I have formed a theory in regard to this matter of introducing, but will not give it here, as space just now should be devoted to fact, and not given to theories.

Foxboro, Mass., June 15, 1886. J. E. POND, JR.

Friend P., your suggestion in regard to getting bees in sections is certainly an important matter. I suppose that this operation of shaving combs to $\frac{1}{4}$ inch uncaps the greater part of the unsealed honey along near the top-bar. Some years ago a correspondent stated that uncapping the sealed honey would cause the bees to move a part into the sections. Moving the combs up near together, probably still further tends to secure the result. We have practiced your method of introducing queens, quite extensively; and there are so few failures, I think we can often afford to lose a queen once in a while, rather than to take the time required by other methods.

MAILING QUEEN-BEES WITHOUT ATTENDANT WORKERS.

A NEW RULING OF THE U. S. POSTOFFICE DEPARTMENT IN THE MATTER.

SINCE what we wrote on page 537, the following has come to hand from Prof. Cook:

Dear Mr. Root:—I have conferred with our President, ex-Congressman Willits, and he suggests that we send a great number of petitions to Hon. John Jameson, General Superintendent P. O. Department, stating the fact that queens can not be shipped without attendants, and urging that the ruling be changed. I will ask Mr. Newman to act at once through the Union. You had better also push the matter, through your subscribers. Mr. Willits will write to Jameson personally; as he knows him well, his appeal will have great weight. The Canadian matter is a matter of treaty, and

we can not easily cure the evil, if we can at all. I can not go to Washington before winter, when, if it seems wise and best, I can go. A. J. COOK.

Agricultural College, Mich., June 23, 1886.

Now, friends, you see what we have to do. It looks as if it were a move somewhat similar to the one relative to increasing the postage on seeds and merchandise. It hardly seems possible that the postoffice department should for a moment think of trifling with a matter concerning our great and growing industry; and to make a ruling that live queen-bees could pass in the mails without the half-dozen attendant workers, is surely a blunder, and not intentional. We hope the proper officials will make haste to right the great wrong they have come so near doing. Meanwhile, let us make ourselves heard. Will every bee-keeper follow friend Cook's advice, and send in his petition to his Congressman?

HUMBUGS AND SWINDLES

PERTAINING TO BEE CULTURE.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

THE GOLDEN BEE-HIVE.

I NOTICE a caution from *Agriculture Wheel*, No. 333, Independence County, Ark., notifying the Wheelers to be aware of the agents of the Golden bee-hive. They say it is a humbug and a fraud, and gave reference to you for their authority. Now, as their agents are in this section, selling farm-rights at ten dollars each, I wish you to inform me of the facts, and in what particular. Is it because they sell a patent-right and have none, or is it because it falls short of its recommendation and representations? D. D. BREWER.

Springfield, Conway Co., Ark., June 14, 1886.

Friend B., I am not able to say whether there is a valid patent on the Golden bee-hive or not; all I can say is this: That the men who have for years been traveling about selling rights for the Golden bee-hive have been, every little while, published on account of their swindling operations; and if the parties you speak of are selling farm-rights for ten dollars each, I should say they belong to the same class. They and the people who buy of them are behind the times. Successful modern bee culture requires no farm right or right of any kind; and the money that is obtained is, almost invariably, obtained by making false pretenses. Investigation usually shows that the features claimed by the men selling rights are common property, and have been for years.

F. E. FROSS AND HIS STUMP-BURNING PENETRATIVE.

We clip the following from the *Farm and Fireside*:

The U. S. postal authorities recently arrested the propagandists of the wonderful "Acme Penetrative," for burning stumps, whose headquarters of late have been at New Carlisle, Ohio, the charge being that of using the mails for fraudulent purposes.

THE FIRM OF JANĒ MEEK & BROTHER.

A Serial Story in Ten Chapters.

BY REV. W. D. RALSTON.

CHAPTER VII.

THE BUSY SEASON.

AT length the eighth day from the one on which the first swarm issued arrived; but it was a dark, rainy day, and of course no swarm was expected that day. In the evening the children called their father and mother out to listen to the queens piping. When Mr. Meek had listened for a few moments he said, "You may expect a swarm to-morrow, if it is a fair day," and he was not mistaken. This swarm surprised the children by clustering on the very spot on which the first swarm had clustered. Their father explained that such was often the case; that, in large apiaries, frequently swarm after swarm would cluster on the same limb; that probably there was a scent left that attracted the next swarm.

The children were not so wild with excitement as on the former occasion. They put on their bee-hats and hived it themselves; their father looked on and gave some directions. The bees were marching into the new hive nicely, and the children were watching them intently, hoping to see the queen, when Tommy suddenly began to dance on one foot, as though greatly pleased. He did not clap his hands, crying, "Good, good!" but grasped his pants behind the right knee with both hands, and cried, "Crackee! crackee!" His father asked what was wrong, when he cried out, as though in great pain, "I am stung, I am stung! oh dear! oh dear!"

Jane's arm was soon around his neck, and comforting words were whispered in his ear. She said, "Poor little Tommy! how I pity you! but you know we are bee-keepers, and will both have to take some stings. We must just bear them as well as we can."

It seemed a bee had crawled up his pants on the inside, and inserted its sting under his knee, in a tender spot. His knee swelled considerably, making him quite lame; but his lameness lasted only that afternoon. His father told him how to prevent such an accident occurring again. If he had on boots he could tuck his pants inside; or if he wore shoes he could tuck them inside his socks, or else tie a string around the lower ends of the legs.

The bees in the nail-keg exhibited no disposition to cast a third swarm. The question with the children now was, what to do with the nail-keg hive. The old black weather-beaten nail-keg looked so badly alongside of the two nicely painted hives that they wished to get it out of the way. They read over what the book and papers said about transferring, and often talked it over with papa, but it was to all a thing they dreaded to attempt. Here a most fortunate thing occurred. Rev. Mr. Robb, an old friend and classmate of their father, came to pay him a visit. Mr. Robb had kept bees for years, and was expert at transferring, and readily agreed to undertake the job. As they desired increase, he said they could divide the colony and feed both up so they would winter. He first ordered from the supply-dealer a dollar queen and a dozen cheap feeders. A couple of empty nail-kegs

were then procured; and just after dinner Mr. Robb removed the old hive, setting another nail-keg in its place, to retain the bees returning from the fields. After smoking the old hive he inverted it, and, placing the other empty nail-keg on top, closed all crevices by winding a sheet around where the two came together. He next drummed for some time on the lower keg with a stick. He then removed the upper keg, where nearly all the bees were found clustered in the top of it. He next cut away the hoops from the old hive and took it to pieces, taking out comb after comb which he fitted as well as he could into empty frames from the new hives, fastening them in with slender willow rods, tied above and below the frames. These frames of comb he hung in two empty hives. He was careful to fasten in all the brood he found, and also all the comb, except a few fragments. He then placed one of these hives upon the old stand, and the other upon a new one. The bees that had been driven out of the hive into a nail-keg, and kept covered up, were now brought, and a part emptied in front of the hive placed on the old stand; but the greater part were emptied in front of the hive on the new stand, and made to enter it as though they had just swarmed.

Mr. Robb explained to the children, that many bees would probably return to the old stand, and therefore he gave more to the one on the new stand. After contracting the entrances to exclude robbers, they were left until the new queen arrived. Mr. Robb then opened both hives and looked closely over the combs. In the one on the old stand he found queen-cells started, while he saw none in the one on the new stand, but found the queen upon one of its combs. He placed the new queen in the queenless hive, leaving her caged for thirty-six hours, and then, cutting out all queen-cells, released her, and she was accepted by the bees. Before he finished his visit he assured the children that his work had been a perfect success, and that they had a start of two good colonies; but that, whenever there was a dearth of honey, they must feed them sugar syrup, and he showed how the new feeders could be set inside the hive, alongside of the combs, which did not more than half fill the brood-chamber.

Frequent examinations convinced Mr. Meek that the first swarm would fill the case of sections placed upon it, and that the second swarm would about fill its brood-chamber, and that the two colonies made by Mr. Robb would need considerable feeding to prepare them for winter. After a time Mr. Meek told the children to prepare a second case of sections as they had the first. The case on the first swarm was raised up, and this empty case put in its place, and it was then placed on the top of the empty one. As the sections had not closed tops, the bees could work up through the empty one. To place this case on the hive required the entire family. Mr. Meek raised the whole case, and held it while Tommy slipped in the empty one. Jane, smoker in hand, kept the bees in subjection, while mamma gazed in admiration at the daring achievement. Here arose a difficulty. The cap was too small to cover two cases and reach its resting-place. Mr. Meek took a fence-board, and cut and nailed up a rim that filled up the vacancy nicely. As soon as the outside sections were sealed, the upper tier of sections was removed, but the second was left until the frost came.

When this new honey was taken and placed in the store-room, the whole family praised it highly. And when the honey was cut from a section into a dish, and placed upon their supper-table, they pronounced it delicious. Jane said, "It is better than any candy I ever tasted;" and Tommy added, "I tell you, our bees make the boss honey; the comb melts in my mouth. You remember, pa, the honey Mr. Baker sent us, how tough the comb was; you could hardly cut it, and it did for chewing-gum."

His father said, "Comb is never good to eat after bees have hatched in it. Each young bee opens a web around the inside of the cell. This makes the comb tough. As each bee hatched in the cell adds another web, old combs become very tough. This comb had no bees hatched in it, while Mr. Baker's had; hence the difference."

When the other case of sections was removed, after the first frost, it was found that there was honey in every section. Six in the middle were about finished, the rest only partly sealed, but could all be used in the family. In fact, it had already been decided that no honey should be sold that year. Their entire honey-crop was fifty-three pounds.

One evening, after supper, Jane produced the account-book of the firm, which showed as follows:

ARTICLES PURCHASED BY THE FIRM OF JANE
MEEK & BROTHER.

Number of packages of sugar for feeding	\$2.75
Five Langstroth hives	8.00
Five hundred sections	3.50
Freight on sections30
A box containing one smoker50
Fifty tin separators	1.50
Eight pounds of thin comb foundation	4.00
Freight on this box25
One dozen feeders60
One queen	1.00

\$22.40

Of this amount, \$2.30 was from the children's pocket-money. The rest, \$20.10, was money loaned the firm by Mr. Meek.

Of course, more supplies had been purchased than were needed, because these had to be shipped, and could not well be shipped in smaller lots than they had ordered, and they knew that any supplies left over would do for next season. The children made out the following account, to be placed opposite the expenses:

Supplies and utensils on hand	\$9.60
Four colonies at \$5.00 a colony	20.00
63 pounds of honey, at 15 cts. a lb.	7.95

\$37.55

A comparison shows that, although the firm was in debt, there was a gain during the year.

Tommy did not like to be in debt, and said to his father, "You gave me a book about Benjamin Franklin, and told me to follow its teachings. You showed me what he said about debt, and said when I went into business to remember his advice, if I would be successful—to have as my motto, 'Owe no man any thing.' Now, our firm is deeply in debt. Are we doing right?"

His father answered, "If you had borrowed this money from a stranger, I would not approve of it; but as it is, I think it all right. You remember I gave my consent to you and Jane keeping bees for certain reasons. You are being educated. The money is invested in educating you to do business; to understand bees, and also to keep bees; and if the firm fails to pay me, I will not consider the money lost. This debt to me is not like another

debt; I merely ask you to pay if able; and if disaster overtakes you, I will forgive you the debt. An old farmer advised his son never to go in debt at all; 'but,' said he, 'if you do go in debt, let it be for manure.' I would say to bee-keepers, never go in debt at all; but if you do go in debt, let it be for improvements which will increase your yield of honey.

To be continued Aug. 1.

THE DOOLITTLE SURPLUS ARRANGEMENT.

CAN HONEY BE SENT TO MARKET IN THE SAME CASE IT COMES FROM THE HIVE?

IN your remarks on the Doolittle surplus arrangement for comb honey, in GLEANINGS, June 1st, you say: "Such an arrangement works nicely on hives, but is not practicable to use for shipping honey to market. For home use, however, it seems to answer every purpose." If I understand your last sentence, you wish to imply that the case is not practicable for bee-keepers raising honey for market, but only for those who raise honey for home use, etc. I should like to have you tell us if you ever sent comb honey to market in the cases in which it is built, in a marketable condition? Is the combined shipping and honey crate a marketable honey-case? For my part I don't think it is, and I don't think it is ever used for that purpose. The fact is, I don't know of any bee-keeper who ever sent his comb honey in the case it was built in. This arrangement that you call the Viallon plan, etc., instead of the Doolittle surplus arrangement, etc., has been used for nearly ten years by Doolittle, and it is from a sample arrangement of wide frames he sent you in 1876 that you came out and advertised the wide frames to hold eight sections, and your three-box case you say is similar, and advertised by you several years. I claimed no novelty in the arrangement; but as I used it with better results than any other case, and as it had not been made public, to my knowledge, before I saw friend Doolittle's article in the *A. B. J.*, I wrote to him and asked him permission to manufacture it and call it his arrangement, which is nothing but right, as he was the first one to use such an arrangement. I will take this opportunity to ask friend Doolittle to give us his views on the subject, in GLEANINGS. P. L. VIALLO.

Bayou Goula, La., June 12, 1886.

Excuse me, friend V., if I did not say just what I meant to say in my foot-note to your communication in our issue of June 1st. The combined shipping and honey crate illustrated in our price list has been used quite extensively about here, and I think generally in different localities, for taking honey to neighboring stores and groceries. It can be lifted directly from the hive; and after the bees have been expelled it is ready to be handed over to the grocer without removing a section, unless you think best to take out one or two, so he won't have any trouble in getting them started. As to whether it has been used for shipping on the cars or not, I do not know. I am inclined to think it has, however, because one or two complaints have been made that there is no ready method of closing the openings in the bottom, where the bees get in, during ship-

ment. It is true, I first got the idea of tin separators from friend Doolittle; but he told me at once that they were not original with him—that he first saw them at his neighbor Betsinger's. We afterward found out that they were used and patented by another York-State man whose name I do not now remember, even before Mr. Betsinger used them. For the sake of economy, and to enable us to handle them as we handle a brood-frame, I suggested the wide frame, now in general use almost the world over. I certainly did not intend to omit giving credit anywhere; but most of these things have come up so gradually, and so many have contributed a little here and a little there, that it seems a pretty hard matter to call any of these things after the name of the inventor, unless, indeed, we do as our English friends do, and attach a string of names to something in common use that has been given us by quite a number of different people. As we do not produce comb honey, we are hardly prepared to decide which arrangement is best, all things considered. We manufacture whatever the brethren call for.

SOME SUGGESTIONS IN REGARD TO RETURNING SWARMS.

MY WAY.

IT is often necessary to return swarms of bees to the hive from which they have issued, when but little increase in the number of colonies is desired. My plan for doing this is to remove the queen or queens from the swarm, and thus compel the bees to go back themselves. Get the swarm into a shallow swarming-box, and carry them about 200 feet from the place where they clustered, and from the apiary. Gently shake the bees on to a sheet or wide board, and place the box two or three feet from them, so that the queen can be more easily found. She will often fly when the bees are shaken out, and will alight into or at the entrance to the box. If the queen should get into the box, and can not easily be caught, shake the bees out again, or carry the box with what bees are in it to a new spot, leaving those that are not in the box, thus having fewer bees to sort over.

As soon as the queens are taken away the bees will begin to get restless, crawling out of the box, and flying, and will soon return to the hive or hives from which they issued. If, after removing one queen, the bees should stay contented, they should be shaken out again, to find the other queens. If you do not care to save the queen, kill her by cutting with a knife-blade. This can be done without picking her up, which is quite difficult. I sometimes catch the queen in my hand when she is rising to fly. I like this plan of returning swarms better than cutting out queen-cells.

Removing and returning crates and supers to hives, mashing bees, looking over the combs for queen-cells, missing some that ought to be removed, taking the chances of leaving but one cell to hatch, and seeing the bees swarm after all, are more laborious and discouraging.

Should your choice imported queen swarm, and you do not see them issue, you will know it by the bees returning to their own hive.

A NEW INCUBATOR.

Would not some of the readers of GLEANINGS like to try the experiment of hatching chickens by the heat of a colony of bees? Now is the time to do it. Place a sheet of burlap on the frames, and a second story on the hive, then put loose chaff in the second story. Put in the eggs close enough to the bees to get the right temperature. Moisten and air the eggs occasionally. Should the bees swarm, return them. Will the eggs hatch? CHAS. A. WOOD, 20—23.

Tarrytown, N. Y.

I think, friend Wood, that the heat of a swarm of bees is not sufficient to hatch eggs. See what has been written in our back numbers in regard to the temperature of the brood-nest of a colony of bees. You will notice that it is not quite high enough for hatching eggs.

INTRODUCING VIRGIN QUEENS.

FRIEND LAKIN GIVES US SOME OF HIS EXPERIENCE IN REGARD TO THE MATTER.

SPeaking of the lamp-nursery, the queens so hatched, and the methods of introducing such queens, you say: "It will be of no use to attempt introducing these queens by caging." Does this statement apply to all unfertile queens? Would there be, practically, any difference between a queen hatched in the nursery and one hatched in the natural manner? These are my reasons for the above interrogatories: May 29 one of my colonies cast a swarm—a second swarm, I had reason to believe; and after hiving the swarm, and satisfying myself that they were provided with a queen, I concluded I would remove the queen-cells from the old colony, to prevent a second or third swarm, intending to insert the choicest cells in some colonies I had unqueened. On examination I found seven young queens in the old colony, six of which were removed, caged, and introduced to as many queenless colonies. Having use for five queens myself, I gave friend Fisher the sixth. All were caged and successfully introduced to good strong colonies. One of my colonies I had unqueened the evening before the caged queen was placed in the hive. In this case the queen was placed in the colony, caged 24 hours. The remaining colonies were queenless from three to five days, as shown by the register. The cages were improvised—hurriedly and roughly made, yours not having arrived yet. The cages were placed over an abundance of uncapped honey, providing an abundance of stores for the queen. To-day the queens are all fertile, and apparently as prolific as any in the apiary. I have secured some of my choicest young queens by caging the cells, when within three or four days of hatching—unqueening where I wish to requeen, and placing the cage between the combs, being sure the cage is placed with the wire cloth over uncapped honey. Now, if queens can be so introduced; that is, by caging the cells in queenless colonies, there will be a wonderful saving in time over the method of giving unsealed brood and larvæ of the proper age for queen-rearing. Of course, cells can be given a queenless colony; but what is the percentage of losses by this method? With a caged cell they show evidence of a willingness to destroy the cell, but are unable to reach it. In six attempts at cell-caging, all have

proven successful, and four queens so hatched are now laying queens; the fifth has the appearance and actions of a fertile queen; but when last examined, no positive evidence of her fertility was discernible. The sixth is too young to expect any thing from at this writing.

Now, Mr. Root, you know I am one of those little fellows; that is, I am in the A B C class, and the above may not be new or strange to you or your readers; but in view of your statement concerning the introduction of young queens by eaging, I concluded I would write you concerning it.

Where can I find a description of friend Heddon's non-swarming method? S. W. LAKIN.

Eureka, Ill., June 12, 1886.

Friend L., this matter is by no means new. The whole thing has been gone over in our back journals. As a rule, virgin queens can not be introduced by caging, although at times there seem to be a good many exceptions to this rule. The most successful way of getting them into the colony is to let them loose among bees just as soon as they are hatched; and the success of the lamp-nursery depends upon this peculiar fact. Queens that come off with an after-swarm are in no way different from those hatched in the lamp-nursery; that is, providing they are introduced to the colony very soon after being hatched, as those in the lamp-nursery always should be. Your success is a little remarkable, although it is quite common to see bees accept of almost any thing you give when honey is coming in bountifully, as I suppose it was at the time of your experiments. Caging queen-cells has been discussed a good many times; but after a while the plan has been dropped. Friend Doolittle's plan, given in our last issue, may, however, bring it into general use. We have decided that as many, or more, cells are lost when giving the queenless colony a capped queen-cell than by giving them virgin queens newly hatched.—I should think you were having quite encouraging success, friend L., even if you are but a "little fellow" in bee-lore.—Heddon's plan of non-swarming is fully described in his new book, which we mail from this office on receipt of fifty cents.

FLORIDA AND ITS FLORA.

THE NATIVE BEES EXTREMELY LAZY.

SO much having been written in GLEANINGS about Florida, I thought I would try to enlighten some of the bee-keepers who contemplate coming to the northern part of the State. Anybody, however, who settles in this section will not find it nearly as productive of honey as almost any of the Northern States. The bees gather just enough honey to winter on (what little winter there is), and an extra populous colony may make a few pounds of surplus; but now for the reason.

The native bee is extremely lazy, working only a short time morning and night. The rest of the time is spent, like the Floridian, trying to keep cool, and no amount of smoking will drive them up in the combs and start them to work. Thinking that queens not indigenous to this climate would surely

be an improvement, I had a number sent me from the North, but I found they very soon became believers in the maxim, "When in Rome, do as the Romans do."

Northern Florida would be an excellent place for queen-rearing if it were not for the dragon-flies (Devil's darning-needle of the North). They congregate like flocks of pigeons; and the poor bee, laden with honey, finds it a difficult task to evade so many of its enemies in its flight to the hive. If the queen took her wedding-trip in the heat of the day all this would be avoided, as they seem to gather in large numbers only at evening; but she generally takes wing when most of the bees are flying. If the bees gathered nectar in proportion to the yield of flowers, the amount of honey produced would certainly be large. In February, after the bees are over with wintering, they commence gathering honey from the honeysuckle, yellow jessamine, and, during the latter part of the month, from orange-blossoms; then continues one long list of honey-producing plants and trees, such as black gum, holly, persimmon, gallberry, palmetto, etc. From the two last mentioned they gather what surplus they make. All of the honey is remarkably white and thick. Many persons, who are competent judges, regard that made from orange-blossoms as superior to white clover.

There is a ready sale at all times for honey in Florida. It is now selling at 20 c. per lb.; and during the winter, when every thing is booming, the price ranges from 25 to 30 cents, and sometimes even more. C. MOORHOUSE.

Hibernia, Florida, June 9, 1886.

DISPOSING OF THE HOUSE-SLOPS.

FRIEND TERRY GIVES US SOME PRACTICAL IDEAS ON THE SUBJECT, TOGETHER WITH SOME FACTS FROM ACTUAL EXPERIENCE.

FRIEND ROOT:—There was a great deal of sickness in the family that lived on this farm for some time before I came here. Their physician once told me he felt ashamed of having to come here so much. I think about all of them are now dead. They may not have been a healthy family, but still I feel sure the cause of much of their ill health lay inside of the dooryard fence. My friends, when they heard I had bought the place, said, "Don't take your family there to live; it is an unhealthy locality." After looking around awhile I decided it *was* a bad place to live in, the shape it then was, but that it could be made a very healthy and pleasant home. This is about the shape we found things in: A wing of the house extended over the well, and was used as a kitchen and a place to make cheese, butter, etc. The slops and whey that was not used for feeding, were simply emptied right out the doors. I should judge this had been done for a good many years. About 30 feet away stood the old dilapidated privy, or, rather, the remains of it. This had been in use, say 40 years, and probably never once cleaned out. The soil in the dooryard was a gravelly loam, about 16 feet deep; then came clay. The well was dug down through this gravelly earth and about two feet into the clay. The water in it was simply what soaked through the gravel, and stopped when it came to the clay.

Now, when we consider all these circumstances,

is it any wonder it was an unhealthy place? For a few years, such carelessness might answer; but as soon as the earth became saturated with filth, so it could hold no more, it must flow directly into the well. I say, for a few years it might answer. It might as far as the well water was concerned, but not if we had any regard for the purity of the air that we must breathe. Both pure air and pure water are necessary for the most perfect health.

Now, I have been particular in describing all this, because, with more or less variation, such conditions are to be found in very many farmyards. So bad are they in some instances, that it is but little better than suicide to allow them to remain.

I was simply exasperated the other Sunday when the minister told us we must welcome afflictions; for, "whom the Lord loveth he chasteneth." We have had too much of that sort of preaching. Why not urge us to do every thing in our power to ward off sickness and trouble; but when, in spite of our utmost efforts, they do come, then calmly say, "Thy will be done"? All the prayer in the world could never induce God to save a man's life if he has drank too much filthy water, or breathed too impure air. "Providence helps those *who help themselves*." "The sword of the Lord, and of Gideon," you know. The Lord will never clean out our filthy privies for us. After we have done our best, then there is some sense in asking for help, or even for help to do our best, but not in neglecting what we know ought to be done, then praying for every thing we want. I am not a preacher, Bro. Root—only a farmer; but sometimes I think a minister would know better how to preach to him if he would go and live with a farmer a year or two.

Well, we tore off that old wing, and let in the sun and air, and used no water from that well for years, but went 50 rods to a spring for all we wanted. Since then we have taken out the well, dug it deeper, and put in sewer-pipe instead of stones, and the water, I know, is pure and nice. The privy is over on the other side of the yard; but that was not necessary, for a coal-oil barrel, sawed in two, is used instead of a vault; and with plenty of dry muck or coal ashes we have no trouble in turning the filthy matter into beautiful flowers. I am, however, intending to change, soon, and build a privy at one end of the kitchen porch, and use large galvanized iron pails. This is for convenience of emptying, and for the comfort of the ladies in bad weather. But now for what I am particularly after in this letter—that is,

THE DISPOSAL OF THE SLOPS.

No wise man, nowadays, will pour them out around the door. They must be carried away, then, either by a drain or otherwise. A good underground drain is handy, but I am afraid to use one. Sewer gas is dangerous stuff, particularly where there are children. I know there are traps to keep it from coming out, but still it is risky. A friend of mine *knew* there was a leak or defect in his pipes, but it was neglected until his youngest child died of diphtheria. Gasoline-stoves are safe, perhaps, if properly used; but a few days since, a lady near here *thought* she turned the fire all out; then she filled the stove. She is buried now, and her husband would give all he is worth if he had never brought that stove into the house. No, we don't want to play with danger where the lives of our families are at stake. There is no drain, nor are any slops emptied inside of my dooryard fence—at least

not more than once in a place, which can do no harm. For years I carried the water all away in pails; but last winter I found in Illinois a slop-barrel, on wheels, that is just the thing exactly. It stands by the kitchen porch, and will hold all the day's slops, even on Monday. A boy can draw it away and empty it. Disinfectants can be used occasionally, if desired, but will hardly be necessary, as it gets pretty well cleaned out on washing-day. And then there isn't the danger, when it stands out in the sun and air, that there is from an underground drain. In the coldest weather we may have to use the pails again.

My wife has said more pleasant things about that slop-barrel than she ever did about her oil-stove that cost five times as much, or about her silver tea-set that I got her last winter. I have seen several slop-barrels, but none before equal to this. It is neat, cheap, and easily managed. They retail for \$8.00, but I shall be pleased to order one for any of the friends who will send me \$5.50, unless you, friend Root, will get a lot. The makers wrote me I might get some made here, and thus save freight for neighbors, and I should be pleased to turn this offer over to you. If you have any doubts about their being a splendid thing, write to my wife. I don't have a chance, any more, to look a little sour, when, coming in in a great hurry, my wife meekly says, "Can't you empty those slop-pails now?"

Hudson, O.

T. B. TERRY.

Many thanks, friend Terry. Most surely is it true that we can not afford to take any risks; and since we have, by the aid of enlightened science, discovered that such diseases as typhoid fever and diphtheria are largely fed by foul matter in the air we breathe and the water we drink, how great is the importance of being careful! What must have been the feelings of that father when he found that there was even a chance that his child might have met death by the horrible disease diphtheria through neglect and procrastination on his part! Now, friend T., I want you to tell me what you think of my arrangement for disposing of the sewage. The one belonging to our house has just been finished, and I did it in this way: The ground descends on a gradual slope from our back door for some distance. The slope is sufficient so the slop on washing-days passes off freely into the garden; but in the winter time it has been in the habit of accumulating so that the opening frequently needed caring for. Well, a few weeks ago I had the boys dig a trench down the slope close by a row of apple-trees. Along the row of apple-trees was a row of well-rooted rhubarb pie-plants. The trench is about three feet deep and two feet wide. This was filled with stones picked up from the ground, according to the plan of the new agriculture, within 18 in. of the surface. As the drain is perhaps 10 or 15 rods long, the vegetation growing above it, and sending its roots down among the cobble-stones, will, it is presumed, take up and utilize the soapsuds, etc., about as fast as it is made. In case it fails to do so, the trench communicates at several points with our system of underdrains, although it is so arranged as to hold a foot or more of water before it flows over into the underdrains. The open end of the sewer-pipe communicating with this

trench filled with stones is against the wall on the south side of the woodhouse, the woodhouse being made of brick. No windows or doors come near this opening. A large funnel, made of stoneware, something like a sewer-pipe, makes it easy to empty in the slops. Now, when I built it I did not think it possible that any gases could come up through this sewer-pipe to do any harm. At present there is no smell at all. Before it passes off, the fresh damp earth has absorbed it all. If foul-smelling gases should, however, be found coming out of this funnel, some other arrangements shall be employed. Perhaps your plan of a slop-barrel on wheels is the best one that can be employed; and if so, I shall employ it. Meanwhile we want a picture of the arrangement, and then we will see about furnishing them at a low price. It seems to me that at least 100 should be made at one time. You may, if you can, get figures on 100, and I will see what we can do on them during the fall months, when we have plenty of leisure. A matter that concerns the life and death of the little ones around our hearthstones should never be passed over lightly; and *may God help us* in a determined fight against diphtheria and the whole string of malarial fevers.

QUEENS TO CANADA.

TROUBLE AHEAD.

FOR the past six years custom has allowed queen-bees to pass between the U. S. and Canada in the mails without detention, although every first-of-January edition of the Postal Guide during that time has distinctly stated that *samples only* of merchandise are mailable between the two countries; hence the sending of queen-bees through the mails to Canada has been illegal, even if we did put on 10 cts. in postage. Custom, often, for a period of time, has more weight upon the minds of the people than do certain laws, so we lull our conscience to sleep and let custom rule until we are, without warning, rudely awakened. Such an awakening I received the other day by having a choice queen returned by the Suspension Bridge, N. Y., P. M., as "unmailable to Canada." As soon as I recovered my senses I wrote him as follows:

Postmaster at Suspension Bridge, N. Y.,

DEAR SIR:—The inclosed tag, doubtless, you will recognize as one attached to a little box containing a queen-bee and her attendants, which you returned to our postmaster as unmailable matter to Canada. I am aware that the postal regulations say that you are right; but to help advance a growing industry both in Canada and the U. S., postmasters of the past have allowed queens to pass to and from Canada as samples of merchandise (which they really are), much to the advantage of all concerned. I have sent, during the past five years, hundreds of queens to Canada, all of which have gone safely since I wrote "Queen-bee for the improvement of stock" on the tag. Now, will you not please do as former postmasters have done, and help advance our industry? By so doing you will only be following a custom of the past, and receive the heartfelt thanks of bee-keepers in all parts of the U. S. and Canada. Please reply, telling me what I may expect, as I have orders for a score or more of queens from Canada.

Borodino, N. Y., May 21, 1886.

The following is his reply:

G. M. DOOLITTLE,—Dear Sir:—Your letter at hand

this forenoon. Postmasters who have allowed bees to pass into Canada by mail have not understood the rulings of the P. O. Department. By reading Note 4 on page 770, in the January, 1886, Guide, and also note 20, on page 753, same Guide, you will see that merchandise is not mailable to Canada. I send to your postmaster a letter which I have from the department, on the bee-question. Please call at the postoffice and see this letter. You can then write to the department, and ask them to remedy the matter. We can not allow them to pass through the mail.

WM. CARR, P. M.
Suspension Bridge, N. Y., May 25, 1886.

Upon calling at the postoffice I found the following:

POSTOFFICE DEPARTMENT, }
No. 71,924, Canada. OFFICE OF FOREIGN MAILS, }
Washington, D. C., May 6, 1886. }

Sir:—In reply to your letter of the 4th inst., inquiring as to the rule of postage applicable to bees addressed to Canada, I have to inform you that the transmission of articles of merchandise by mail between the United States and Canada is limited by the postal arrangement in force between the two countries to bona-fide trade patterns, or samples (specimens), not exceeding 8 oz. in weight, and that articles of merchandise such as queen-bees, sent for sale in execution of an order, or as gifts, are not bona-fide samples, and are not transmissible by mail from one country to the other. In this connection, see Note 4, of Foreign-Postage Table on page 770, and paragraphs 20 and 21 on page 753 of the U. S. Official Postal Guide for Jan., 1886. NICHOLAS M. BELL,

Superintendent Foreign Mails.

To Postmaster at Suspension Bridge, N. Y.

As my friend in Canada was anxious for his queen, I made a block out of $\frac{3}{4}$ stuff which would slip into an ordinary envelope, provisioned it, put in the queen and ten bees, securely sealed the envelope, and registered the same at our postoffice, directing it via Buffalo.

To digress a little, I wish to say that this queen and her bees went through in perfect order, although they were securely sealed in two envelopes (the ordinary envelope and the thick register envelope). Does not this show that we take more precaution for ventilation of our queen-cages than is necessary? As soon as I heard the queen was safe in Canada I again wrote the postmaster at Suspension Bridge, telling him of it, and showing him by clippings from letters and the *C. B. J.* that queens were passing nearly every day to Canada by mail. I especially requested that he would allow queens to pass the lines until arrangements could be made and a new law rendered, allowing queens to pass legally. I also asked him how he came to stop queens now, when he formerly let them pass. Here is his reply:

G. M. DOOLITTLE:—Your letter of the 2d is at hand. I am sorry I can not allow your bees to pass into Canada. We have allowed them to pass until quite recently, and then stopped, only on receiving a letter from Washington, from the Supt. of Foreign Mails. I shall at once refer your letter to the department, and hope they may make satisfactory arrangements.

WM. CARR, P. M.

Suspension Bridge, N. Y., June 4, 1886.

Now, friend Root and brother bee-keepers, what are we to do? It seems to me that the mutual interests of the bee-keepers in Canada and the U. S. demand that a law shall be passed, allowing us the privilege of sending queens by mail from one country to the other. But how are we to get such a law? "that's the question." I have written to the Superintendent of Foreign Mails about the matter. Had each and every apiarist better do so, or can we bring the matter about through the Bee-keepers' Union? I had thought that it might be a good plan for that body to delegate Prof. Cook or Prof. McLain, to push the matter through. Prof. Cook did

us good service when our own mails were closed against queens.

G. M. DOOLITTLE.

Borodino, N. Y.

Friend D., this same subject was agitated several years ago, and I believe it was decided that stock of all kinds, exclusively for breeding purposes, was exempt from duty. If I am correct, we pay no duty now on queens only, sent by express to Canada. For some reason or other, it seems that the Postmaster-General has considered it expedient to enact more stringent rulings in regard to the transmission of queen-bees by mail, not only to foreign countries, but even in the United States. A letter has just been forwarded to us, sent by the Postmaster-General to a postmaster, notifying him that queens *only* were permitted to pass through the mails—no *bees* at all. We forwarded the letter at once to Prof. Cook, and told him if he thought best to take a trip to Washington to see about it, we would take the liberty of saying that money would be advanced to him for his time and expenses, providing he would undertake the task. It would be a serious matter to have queens excluded from the mails, now that such an enormous traffic has grown out of it; and banishing worker-bees seems, at present writing, to be the next thing to banishing queens. If queens can be sent to Canada in a sealed envelope, we can perhaps manage it that way almost as well as we have heretofore. I am not at all surprised that the queen and her attendants had all the air they needed, even though sealed up in two envelopes. I have for a long time been aware that we have been taking more pains for ventilation than there was any need of, unless, indeed, a larger number of attendant bees are included than is at all necessary. It may be that right here is where the trouble has come in. Unskillful queen-rearers have been putting more attendant bees in the cages than is necessary or advisable, and perhaps some of the postoffice officials have been stung. Whatever is the trouble, it needs the attention of every bee-keeper in our country, and it is needed at once.

COMB OR EXTRACTED HONEY.

A SUGGESTION FROM AN EXPERIENCED MAN IN DECIDING WHICH TO WORK FOR.

PLEASE send me a sample lot of about 100 lbs. of the new white-clover extracted, as soon as you have a good article. Almost any kind of honey will bring a reasonable price in comb; but a poor grade of extracted is almost worthless. Suppose I suggest to you that you tell the many readers of GLEANINGS, that when the bees are gathering a good heavy white honey of good flavor, that they run the apiary for extracted; and that when bees are working on inferior pasture that it is much more valuable in comb. I hope to do much more in honey another season. I have a trade that I can keep by always giving them a good article. I should much prefer being out of honey for a month or two than to put up a poor article.

Allegheny, Pa., May 26, 1886.

M. H. TWEED.

Friend T., your suggestion is something I had not thought of before in just that way.

Very likely an article would sell if put on the market in the comb, when it would be difficult to dispose of it in the liquid state. Will those who have had experience on this particular point let us know about it?

MODERN TRANSFERRING.

A MODIFICATION OF THE HEDDON PLAN.

MR. HEDDON'S plan of transferring is, I suppose, largely practiced by prominent bee-men all over the country, and is most certainly a very great improvement over the old way of cutting out the combs; but it is just *two* jobs to every hive. He proceeds to drum out the queen and bees (that is, all he can of them, usually about half), and puts them on frames of fdn., in a new hive; sets away the old hive for 20 days for the young bees to hatch, then goes over the same work again. Now, I undertook a much shorter method, and I think I fairly succeeded.

I had five colonies this spring that were in box hives that I wanted in new hives, so I commenced on them the first of April. My idea was, that if I could get it done before the queens commenced laying it could all be done at one job. I will now give my experiment and results:

I commenced the first one in the evening; it was warm enough for bees to fly. I first prepared a new hive by putting in frames of fdn., and two combs partly filled with honey. I set the old hive a few feet to one side, put the new one in its place, and set up boards about it to make it look as near like the old hive as possible; for if you don't, they will not like to go in. I then proceeded to smoke and drum, as does Heddon, for about 80 minutes, when I found a good-sized cluster in my box. These I shook into the new hive. I next took the old hive away 50 yards from the old stand; took a hammer and chisel and knocked it to pieces, cutting out all the old comb clean; swept off the bees on the grass, where they soon "scooted" back home and into the new hive.

Next morning, about 10 o'clock, I proceeded to try another one. I got it into the new hive all right. At noon I went to dinner and rested awhile. I again went out about two o'clock to see the bees, and found my hive, just transferred before dinner, "gobbled" by the robbers, completely "gone up." I then saw my mistake.

Next day I went to it again with three more to transfer. If I lost all of them this time, I proceeded the same as before, except that I did not put any thing but empty comb in the new hives, and fed them after sundown; closed them up to one beespace next morning, and watched close for robbers.

Well, now for results: In transferring five hives I lost one by not feeding at the right time. I have just carefully examined the other four, and found plenty of brood in all four of them, and they are building up rapidly on white clover, which is now (May 20) booming. In transferring these five hives I commenced with the first sign of pollen-gathering. I found in one hive 2½ lbs. of honey and a small speck of brood, not half worth saving. By commencing this work at the first sign of *pollen* we may, by feeding the transferred colony a week or two, knock the old box hive to pieces and make a clean sweep at one job, for we seldom find any brood at that time, unless it is a very large hive, and well

filled with honey in the spring, which does not often occur.

I consider, from my short experience, that this is an improvement on any plan of transferring that I know of; at least, so far as time is concerned, and I think it is reliable. There may be some objections found on further trial. I should like very much to hear from others who have had experience in transferring. Our object is, if possible, to learn the best ways to do every thing about the apiary.

North Springfield, Mo.

W. H. RITTRE.

Friend R., the success of your plan depends upon being able to find colonies without brood. I believe it is laid down in the books, that all strong stocks commence rearing brood about the first of January; and about the first of April they should contain quite a quantity of brood. I am well aware, however, that common black bees, without attention, are often without brood when the first pollen commences to come in. Such can be transferred on the plan you mention, with little or no trouble. I have done the same thing in the fall of the year, when a weak colony in a box hive was destitute of brood, and nearly destitute of stores. I did not take the trouble to drum them out, however. I simply bumped the hive on the ground until I bumped out the bees and queen; and if some of the combs went along with them it did not matter much. A frame of brood from some other hive gave them a start in their new quarters, and the transferring was all done in about two minutes. The old combs were, of course, tumbled into the wax-extractor. In our locality, bees seldom have a surplus of pollen at any season of the year. On this account I have always felt that your plan and Heddon's was something of a loss, especially where much pollen had been gathered in the spring, before transferring.

SOME CHARACTERISTICS OF THE SYRIAN HONEY-BEE.

THEY FLY TAIL FOREMOST.

I SAID I liked them, but the like is the same as Mr. Osborn, of Cuba, writes me—they pile up the honey. He says he can stand the stinging of a superior honey-gatherer, which the Syrians are. I have two varieties of Syrians—the Jones-Harrington Syrians, and what Mr. Benton terms the Mt. Lebanon strain. This Mt. Lebanon bee can stand more smoke, and do more stinging, than any other I have yet handled. They scarcely get out of the way of smoke at all. Instead of running down the hive when smoked, they buzz and whirl around, trying to drive off the smoke, and keep trying. They act exactly as you have seen bees when on opening up a nest of ants upon them. If compelled to retreat, it is but a short distance to get breath, and back again in a moment they come, dilating their wings, and driving away the smoke. It seems as though you might smoke them to death before they would give up.

They do more off-hand stinging, or stinging on the wing, than either the Italian or brown bee. In fact, they seldom alight to sting. This is the case with the Mt. Lebanon variety. Even when they have inserted the sting they do not alight, but fly round and round to extract it. During the past week,

more than twenty have stung the back of my hands without alighting. They seem to come tail foremost, and come with a vim at that.

I removed the queen of a very populous colony, when they at once commenced the construction of queen-cells, and in ten days fertile workers had filled nearly every vacant cell, both worker and drone, with eggs. This I had never before noticed. I have frequently seen fertile workers depositing eggs after the loss of a queen, and when all hopes were gone of rearing one (no eggs or larvæ within the hive), but it was something new to me to see eggs immediately deposited on the removal of the queen. The Syrians have more fertile workers than any other race I am acquainted with. But few colonies appear to be free from them.

W. P. HENDERSON.

Murfreesboro, Tenn., May 29, 1886.

A PRACTICAL METHOD FOR CONTROLLING SWARMING.

REVERSING THE BROOD-NEST, TO INDUCE BEES TO GO TO WORK AGAIN?

WELL, if I have not beaten the bees in a pretty easy way, and so completely, too, then I am mistaken. I never used or saw a reversible hive until this year; but now I have several in use, and, of course, the natural tendency is to experiment with them.

The first swarm that came out was put into one of our new reversible hives. When the bees had filled the hive with comb as much as they usually do—that is, within half an inch of the bottom-bars of the frame, the hive was reversed, to see what the effect would be. The first three days thereafter being unfavorable for honey-gathering, there was no change; but on the fifth day the bees began to build the combs to the top-bars (what was the bottom-bar), and to make each comb solid within the frame, by fastening it on all sides to the wood. All this was natural enough; but here is another experiment no one has thought of—or, at least, no one has mentioned it up to date. I had transferred about ten colonies from frame hives to the new reversible frames, and wanted the bees to stay in them and work in sections, but they would swarm in spite of me; after thinking the matter over for a while, and considering how best to get the better of the little rascals, and keep them at work in the old hive, and also to keep the old queen laying, and the colony in good working condition, I hit upon the following plan:

When a swarm came off I removed the queen-trap and sections; and before the bees could miss their queen and return to the parent hive, the brood-nest was reversed. By and by the bees returned and entered the old hive as if nothing had happened; and while they were going in, the queen was released from the trap, and the work was done. Now, the fine little trick I played on the bees was this:

When the bees entered the old hive and found the combs, queen-cells, and all reversed, they were so surprised and astonished that they really thought they had been hived, and were occupying a new house, and the idea of swarming again was given up. By this operation the "wind is completely taken out of their sails," and is what I call using the reversible hive to some purpose.

The time required to reverse the hive is not over one minute, and the time required to hive the new swarm is none at all; as the bees, when the trap is used, will hive themselves. Now, I have pointed out a few of the advantages of using the reversible hive and queen-trap. If the above operations are not strictly practical, there is a chance for some one to "get up" and explain. There is not the least objection to such a plan, as I am sure no colony will attempt to swarm again after being thus treated. By adopting the above, it seems to me swarming may be completely controlled.

Wenham, Mass.

HENRY ALLEY.

Your suggestion is certainly an important one, and no doubt it can be made to answer a good purpose, although I am a little inclined to think, from what experience I have had with swarming, that the plan will not "always take the wind out of their sails," as you express it. Very likely the experiment will be tried by a great many, as it comes in just the right season. Almost any hive can be prepared in a short time so that it may be reversed after swarming, and still keep the surplus-receptacles in their usual place right above the brood-nest. If any others have tried the plan, will they please report?

LETTER FROM CHINA.

SOME VALUABLE FACTS FROM OUR MISSIONARY FRIENDS.

WHEN I first came to Foochow, which place is only a little north of the tropics (N. lat. 26° 7') I found that well water here was not nearly so cool as it is in Oregon or Maine. Now, we are very sure that the interior of the earth is hot, while the temperature of the surface of the ground varies with the temperature of the air. But the amount of this variation decreases as we descend into the earth, so that at a depth of 30 or 40 feet we ought to find a nearly constant temperature the year round; and this temperature can not differ much from the *mean* annual temperature of the air above; hence, well water and spring water are much warmer in the tropics than in the temperate zones.

At Shau-wu a Chinaman ventured the remark that well water was warm for the winter half of the year, and cool for the summer half of the year. It seemed so to him, because throughout the colder half of the year well water is warmer than the air, and so at the first touch feels warm to the bare hand. You don't notice the same thing in your northern climate, because your houses are warmed by stoves; and then, too, the difference between the temperature of the well water and the hand is much greater with you there than it is with us here. Then, again, this Chinaman probably never drank well water in cool weather. He would not dare to. Our well at Shau-wu is about 25 feet deep, and has a temperature of about 67° Fahr. in summer and 63° in winter.

Recently in traveling among the mountains I took the temperature of several springs. One of these, about 1300 feet above the sea-level, had a temperature of 62½°. It is quite a copious spring, comes right out from the bowels of the mountain, and its temperature hardly varies the year round.

Another spring, 500 feet higher up, had a temperature of 55°. I once tested its summer temperature, and I think it was 58°. In that region is a mountain about one mile high, and near the top is a monastery. I once visited this in the hottest summer weather, and in it was a well, the water from which was so icy cold that it made my teeth ache so that I could not drink it with comfort. A Chinaman who accompanied me said it was so cold that it "bit the teeth."

Three weeks ago I crossed a mountain-ridge about 3000 feet high. The water in a spring on the north side, 1500 feet high, had a temperature of 57°. Six hundred feet higher was another, with a temperature of 54°. Near the top was a third, with a temperature of 48°. Coming down again about 2000 feet on the south side of the mountain, a fourth spring, flowing from a seam in a ledge of rock, had a temperature of 64°. In each case I presume the temperature of the spring was not far from the mean annual temperature of the place where it was located. In high northern latitudes the ground freezes in winter to the depth of 20 feet or more.

J. E. WALKER.

Foochow, China, April, 1886.

Friend Walker, is it not probable that these very cold springs you speak of, high up on the mountain, have some subterraneous connection at still higher altitudes, where snow and ice prevail? I suppose it is true in China, as well as in other parts of the world, that the highest peaks are covered with snow, even in the summer time; but even if not covered with snow, I suppose the temperature would be down to about the snow-point, and this might lower the temperature of the water so as to cause it to remain low, even after it issued from a spring several hundred feet lower still. We thank you for these interesting facts.

PREVENTING INCREASE.

HOW I HAVE TRIED, AND FAILED.

DURING the four seasons—the fifth now began—in which I have followed apiculture, I have made the production of comb honey a specialty, devoting some attention to extracted honey, and I endeavor to make all my operations subservient to that end. To do this, the most difficult problem that confronts me is that of swarming—not how much shall be allowed, but when and how shall it be done? I want to prevent much increase, and to that end I have read, studied, and labored. Last year's efforts were largely spent in showing how the plans of Cook, Heddon, Doolittle, and others, do not work. Every scheme I try to prevent swarming fails. The difference in locality will largely account for this, but not altogether. Dr. Miller's plans I have not tried, chiefly because of the time and labor involved.

I am now going to give the results of my experiments of last year, for although I have learned chiefly what can *not* be done, I am certain that I am much nearer a solution of the problem than ever before.

THE A B C PLAN.

I have repeatedly tried the plan given by Mr. Root; viz.: Take a frame of eggs and newly hatch-

ed larvæ; put it in a hive filled out with empty combs or frames of fdn. Move the old hive off, and put the new one in its place. Of course, the new hive will catch all the flying bees—or else it won't. I have known nearly all of them to remain with the old stock. Over half the time the old colony will swarm some later, unless I weaken them down so that they will do me no good during the season; while the artificial colony will often loaf in an almost empty brood-chamber until the queen is hatched and laying. Every time I tried that plan this year I failed.

PLANS OF MY OWN.

I have tried moving the queen and one or more frames to some other location. The bees left in this queenless colony do nothing but build queen-cells, and proceed to swarm as they hatch, providing I do not destroy the cells after the larvæ are all sealed up.

I tried the following expedient with several stands last year: I removed the supers, took out six of the eight frames, gave them two or three shakes, set them with the few bees still adhering in a new hive, and moved them off to a new location. I put one of the remaining frames in each side of the hive, filled up with frames containing starters, and put on the supers again. Every one of them swarmed soon afterward. I took out the old frames of brood, putting frames of fdn. in their places, and put the swarms back. Two of those came out afterward, leaving eggs and brood, and scarcely a bee to take care of the poor helpless infants.

THE ABOVE PLAN WITH NATURAL SWARMS.

With several natural swarms I tried thus: I put a frame of sealed or unsealed brood in each side of a new hive filled up with frames as above, hived the swarm, set them on the old stand, and put on the supers. All but two swarmed out again in from two hours to eight days; and those two showed signs of discontent for three weeks afterward. In all the above cases I had destroyed all queen-cells.

Again, last year I tried several times hiving a swarm in a hive that had recently sent off a swarm. Every one came out again in from three hours to three days, except two that were thus hived after the honey-flow had ceased. From some of these, by the way, I had removed about half the frames.

I regard it as a significant fact, that out of some 30 swarms absconding thus, only two have ever left the apiary. They always settle, and, when hived more to their liking, go to work as busy as—bees.

MAKING NEW COLONIES FROM SEVERAL OTHERS.

Prof. Cook says, that by taking one or more frames from several different colonies, and forming new ones, he can allay the swarming impulse. I do not know that the plan has ever succeeded with me, while I do know that it has failed a number of times.

SWARMING IN MAY.

I intended to make several artificial swarms, and form nuclei in May last year, but I was disappointed in not getting the queens I wanted in time. I did swarm two toward the last of the month, greatly weakening the stocks containing the old queens. They both swarmed about a month later.

WHAT DOES IT ALL MEAN?

If the above array of facts means any thing, it

means that bees want to swarm; and that when they do, they want to set up housekeeping anew. After-swarms are more apt to stay when hived on frames of brood; but even they will loaf until the queen gets to laying.

NEW SWARMS DO NOT OBJECT TO HONEY.

While I say that bees want to go to housekeeping anew, I have never yet seen any indication that they object to a lot of honey in the upper story. My bees do not swarm until they have begun to store honey considerably. I always put on sections as soon as honey begins to come in plentifully. Last year I hived my swarms in new hives on new stands, leaving the half-filled boxes on the old stand, hoping that they would prevent after-swarming, but they never did. Following Heddon's teaching I put the surplus arrangements on the new hive and set the hive on the old stand. They go right to work in them, as if nothing had happened.

WHY MY BEES MUST SWARM DURING THE HONEY-HARVEST.

My experience convinces me that Mr. Doolittle's method of artificial swarming will not work here. His harvest comes in July. He has all of June to build up and do his swarming, and well may he make three colonies out of two within a week before that season sets in. But here, swarming and honey seasons come alike in June. Our vernal season is generally cool and backward of late years. I have never yet had a good yield from fruit-bloom; consequently, something like the horse that is blind in one eye and can not see out of the other, one-half of my bees diminish and the other half do not increase. That is a little stretched, however. About June 5th, white clover begins to yield copiously. Possibly one-third are strong enough to swarm in the next ten days. The rest will swarm all the way from June 15 to July 15. They take their time to it; but swarm *they will*, and don't you forget it. They do not quit when honey quits. Now, I do not give it up. I have already planned to do some artificial swarming this year, and I hope to meet with some success. But, so far as I have learned by experience, I see no way to do but to let them swarm.

OVERRULING.

But if we can not prevent we can overrule swarming. This is what I mean by overrule: Hive your swarm; put on supers, whether you had them on the old hive or not; set the hive on the old stand. Take the combs and remaining bees from the parent colony and unite them with one, two, or half a dozen weaker colonies, according to their strength. Work them so that the rapidly hatching brood will soon have those weak colonies booming, and put on supers at once. I have several colonies at work by this means that otherwise would have done me no good at all. I think the plan preferable to Mr. Doolittle's plan of uniting weak colonies before the honey-harvest, at least in this locality.

Mechanicsburg, Ill.

GEO. F. ROBBINS.

Friend R., after you have tested these plans through a longer term of years, I think you will find that, as a rule, in many seasons you will succeed better. Your bees seem to have had a sort of swarming mania; and when they go at it in that way, I have often-times thought it was best to let them swarm. Where I was very anxious to have them finish a set of boxes, I have succeeded by re-

moving the old hive to a new stand, and hiving the swarm in it. They had a new location, even if they did have their old hive and partially filled sections. Sometimes giving a large amount of room in the brood-apartment seems to satisfy them. At other times, nothing short of a new location will answer: but when they *are* satisfied, they go to work with such a vim that it seems as if it were worth while to humor them some. In friend Terry's new book on horses and cattle, he tells us how he got large yields of milk from an eccentric cow. He conceded to her whim, and she paid him by a great yield of milk; and altogether it paid to let her have her own way. Is it not often the case with a colony of bees, when they want to start out in a fresh home?

MARKETING HONEY, AND ITS WINTER CARE.

THE RESULT OF OPEN WINTERS.

THE same general rules which guide us in marketing extracted honey are applicable in the case of section honey. It should be made attractive to the eye and satisfying to the taste, and should bear the name of the producer upon each package. The greatest care should be taken to prevent the surface of the comb being soiled or broken. If so disfigured, it should not be put upon the market unless it can be sold without the producer's name. The sections themselves should be scraped and sandpapered till they shine, and the crates should be either white and clean, or nicely stained or painted. Each package should "set off" its contents. Honey should not be sent to market in the half-stories, or cases of the hives, but in nice white crates made for the purpose, with glass at one side at least. There is a great deal in a show of honey, and so the more of these crates piled up in a window the better, because the honey is made more attractive, as also more conspicuous. The winter care of honey is important. Extracted honey, if not kept in a constantly warm place, will granulate; that is, it will become hard and white, and appear much like lard. Many people think this change in honey is a sure sign of adulteration, and begin to talk of sugar, but such poor creatures do really deserve our pity. But we must overcome a just contempt on our part before we can bestow such a sympathy. To relucify honey it is only necessary to warm it slowly and thoroughly. Proceed as follows:

Take a tin or iron vessel of sufficient size, and place inside it a wooden block or light iron grating of some kind, about half an inch high, and large enough to support the vessel containing the honey. Place this latter vessel upon its support, and fill the outer one with lukewarm water as high as possible without covering the honey. Remove the lid from the honey, and place the whole affair over a slow fire; keep the water just under the boiling-point till the honey is all melted. Seal up again while warm. Section honey should be kept where it is dark, dry, and warm. The light will spoil the color of the capping; damp will burst the cells and sour the honey; and cold will granulate the honey.

The winter of 1884 was so severe that our bees neither required nor could get much care. The greatest trouble in open winters is on account of

the tendency bees have to fly when the weather is unsuitable, and the constant uneasiness among them. They are disturbed every few days by the heat, and do not really settle down quietly enough to winter well; and as a consequence of all this they consume far more honey than is good for themselves or their owner; and often, before the latter is aware, the honey is all used up and the bees starved.

Another trouble consequent upon the large consumption of honey is a great tendency to dysentery. Our endeavor should be to keep the temperature of the air within the hive as unvarying as possible. With bees packed in the cellar or bee-house, we shall have little trouble; but with those in the clamp it is another matter. During severely cold spells the hive-entrances should be kept almost closed; in "reasonable" weather they should be wide open; and during mild spells, open, and shaded from the sun so as to keep the air as cool as possible inside the hive. During warm spells, when there is no wind, and when the air is really warm, leave the entrances open and unshaded for a few hours each day, that the bees may fly. At all times keep the entrances clear of dead bees, snow, ice, etc. Protect from all wind, and give the bees candy during flying spells, when short of stores. Don't let them starve. MATHIAS SCHNEIDER.

McIvor, Mich.

WHAT KILLED FRIEND MILLER'S FIGWORT?

A YOUNG LADY SHOTS THE BEES.

LIKE Rip Van Winkle I have been sleeping for a while, but not for twenty years, so far as being heard much about the bee-business is concerned, so here I come again. I think I can guess what killed Dr. C. C. Miller's figwort. Last year about this time I had several rows of figwort in my garden. It was in its second year's growth, when I noticed it looked yellow and sickly, and did not seem to grow much, when one day I was hoeing in it and discovered that something was working at the roots; and on further search I found the roots were nearly all eaten away by a large worm which, on first sight, almost any one would take to be the common cut-worm that is so destructive in gardens and cornfields; but on a closer inspection they proved to be a different species altogether. They were a light pink, or flesh color, and from one inch to an inch and a half long, and their work was different from the cut-worm, as they went inside of the stalk near the ground and then went down into the roots, which they ate out clean, excepting the bark. They seemed to prefer two-year-old roots rather than one-year ones.

As soon as I made this discovery I began digging up all of the plants, and could find generally from four to eight, and in one case I took as many as fifteen worms from a single hill. This disgusted me with the figwort, so I dug up all I had, and don't let a stalk grow since, although thousands of young plants are coming up all the time now.

The other day, as a bee-man a couple of miles from here was going to the field to work he told his daughter, a buxom lass of 18, that a certain stock of bees didn't act right, and told her to watch them, and if they swarmed, and tried to go off, to shoot them, looking at his wife, and laughing as he said it, but never dreaming she would do any thing

of the kind. But pretty soon, out came the bees; but not making any attempt to alight, they rose right up from the hive and began to work away. She, seeing they were going, concluded something must be done to stop them, so she ran into the house and grabbed a shot-gun loaded with a heavy cartridge of shot, and out and after them. By this time they had got off quite a piece, and were rising rapidly in the air, in a funnel-shaped cloud, and were getting nearly out of sight, evidently fixing for a long flight, when she raised her gun, braced herself, and, pointing the muzzle straight at them, blazed away. She says a shot bird would not have dropped to the ground any quicker than those bees did, where they clustered on a little bush, and she hived them at her leisure. Well, that shot took the romance all out of them, for they went right to work like good bees. This morning I brought that swarm to my apiary.

A. A. FRADENBURG.

Port Washington, Ohio, June 17, 1886.

It may be, friend F., that the failure of figwort, after standing two or three years, is owing to some such worm as you describe, that feeds on the roots, although we never discovered any thing of the kind when we plowed up our old plantations.—Bringing down a swarm with a charge of shot is a rather new idea, but not so very improbable after all. We have had many reports indicating that throwing dirt, sticks, or stones, through a swarm just as they are getting ready to move off demoralizes them so as to cause them to cluster. Perhaps the shot did the same thing in the case you mention. Where it can be done conveniently, we wish some of our bee-keeping friends who have shot-guns handy would give it a test. Firing guns so as to disturb the bees by the sound has often been recommended; and may be that sending a charge of shot right through the cluster has before been recommended, but I do not now remember of any such case.

“GETTING BEES OUT OF SECTIONS.”

FRIEND HEDDON'S METHOD.

I HAVE quoted the above heading from brother Miller's article on page 475. I think I am safe in saying that we all thank friend M. for shedding more light upon this practical subject; but, after reading his article, I felt as though I could add a little more brilliancy to the torch before I passed it along.

First, let me say, that, years ago, I tried the doctor's plan of opening several hives at a time, in order to facilitate matters when driving the bees down with smoke. When they were at all inclined to rob we blew the smoke through a wire-cloth frame laid over the top of each of the supers, opened. We didn't like the plan, and abandoned it. The one which I will now describe, and which is more briefly described on pages 80 and 81 in my book, suits me the best of any method I have ever tried or heard of.

You know we use a one-story case holding $4\frac{1}{4}$ sections, open top and bottom, all cases being interchangeable, and used on the tiering-up plan, as described on page 80 of the book above referred to. By the above system the most finished cases are always on top; and when we find one ready to

come off, we remove the cover, and quickly and sharply puff smoke into all the ranges between the combs. With our mouth we now energetically blow between all the ranges, and we do both as quickly as we can write these words. No bee is hardly allowed time to commence to fill his sack. More than four-fifths of the bees immediately descend out of the case. We now quickly lift it, cover the hive, and, holding it over the alighting-board, shake it with a jerking, tremulous motion—a motion that, above all others, will dislodge the foot-hold of bees—and I think I am safe in saying that not over 50 or 100 bees remain. We now carry the case to our screen-house, which is described in our book on pages 56 and 65. Here the cases are stood on end, standing on each other when lack of room requires; and as the light passes readily through these shallow ranges from either side, the bees leave the cases in a few moments, when the screen-house doors are opened and all the bees are ejected into the open air in an instant. All this is done with such dispatch that the robbers can not get the first taste, even during times of honey-dearth, when most persistent.

We have found the above method as speedy and practical in the apiary as it looks on paper. It has given us great satisfaction, and we can't imagine how the method can be excelled. Of course, it would not work well with two-story supers, or closed-top sections; but we do not lament this fact, because there are so many other reasons why we could not be induced to use either.

Relative to this subject, I wish to mention a principle among bees, not mentioned among others, and, I believe, not usually recognized. Ancient authorities have told us that smoke, or any thing else that frightens bees, saves us from being stung, because, when frightened, they fill themselves with honey, and, when so filled, neither desire to nor can they sting. Now, I have found that the *fright* they receive is what prevents their stinging. I mean “fright” direct, no matter whether they fill themselves or not. With smoke, I have perfectly subdued very angry swarms while clustered upon a branch or fence-rail.

JAMES HEDDON.

Dowagiac, Mich., June 18, 1886.

Friend H., your suggestions indicate beyond question that you have had experience in the matter; and since you mention it, I remember that we used exactly the same plan to get the bees out of the sections years ago. The tremulous motion looses the bees' foot-hold, and then a quick shake will tumble them out pretty rapidly.—I am glad you have decided to use none but open-top sections, for almost every season we have more or less complaints from parties who wanted closed-top sections, only they forgot to say so. Some go so far as to say they would not take open-top sections as a gift, and ship them back before waiting for orders. In vain have we told them that the openings could be closed by means of strips of wood or enameled sheet. They had their own notions of things, and would not be pacified. Of course, we are always glad to make closed-top sections where people want them; but where nothing is said about the openings, we always send the regular goods.—You may be right, friend H., in saying that bees may be *frightened* into subjection, without filling themselves with honey at all; but

we have been so much in the habit of subduing them while on their combs, with honey right before them, that it has never before occurred to me the same thing might be done without any honey at all. By the way, after you get the bees out of your cases of sections, how do you send your honey to market? You may have told us about it; but if so, I have overlooked the fact. Tell us a little just how these one-pound sections shall be handled after we get the bees out.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

HOW AN A B C SCHOLAR HAS SUCCEEDED, AND RESULTS.

AS I see in GLEANINGS you notice even the least of bee-keepers, I thought I would tell you my experience. I live in an excellent farming section, with lots of basswood. In the spring of 1884 I bought a swarm of bees of Mr. Harrison. They were in an old-fashioned box hive, fair hybrids, and very strong. They "hung out" all summer, but did not swarm. I got very little white honey; but in August they were transferred into a Quinby hive, and made about 10 lbs. from the buckwheat flow. Last year they swarmed twice—the first, July 13th; the second, July 22d. I had them packed in the most careful manner possible, six inches of chaff on each side, except the front, and the upper story filled. The first swarm filled their hive (every frame was filled with empty comb), and made about 25 lbs. of as nice basswood honey as you ever saw packed in 1½-lb. sections.

The second was hived in an old box hive, and wintered well, though only half full of comb. I fed them 5 lbs. of granulated sugar. All three were packed as well as I know how. This spring, while two had wintered finely, the first swarm of last year was dwindling to a pint of bees, with a patch of brood as large as the palm of your hand. I put them in a nucleus hive to hold two frames. The next day they swarmed out till there were not three bees left in the hive. In a few minutes they came back. I think they lost their queen in this sally.

On opening the old hive, in the latter part of April, I found solid sheets of brood and drones capped over. Last week, with the help of Mr. Harrison (my confidential friend in bee-keeping) I transferred the box swarm. We had poor success. The combs fell down, but I threw away all but the brood, and put in sheets of comb built on foundation. It was his second attempt, and I had acted as an assistant at one other. I can't tell how it will get along now. I am a great enthusiast on the subject of bees.

In my limited experience I have found bees to store pollen in the side boxes, but not in the upper story. I am reading your A B C book. My account in the bee-business would be as follows: Expenses for hives and bees, \$6.50; value of honey, \$6.00. Value of bees, \$10.00. Profit, \$9.50.

JARED VAN WAGENEN, age 14.

Lawyersville, Scho. Co., N. Y., May 3, 1886.

SHALL WE PERMIT MISLEADING OR FRAUDULENT ADVERTISEMENTS IN OUR COLUMNS?

I inclose a clipping from a paper. Can you put it in labels, and also put your name below it? I admire such a stand as this by any editor, and only wish that more of them would do as this one has done.

Duarte, Los Angeles Co., Cal. W. W. BLISS.

Below is the clipping referred to above:

We will not publish, for any price, any patent-medicine or lottery advertisements, or humbugs or "sells" of any kind.

Our advertisers are all reliable men; and if subscribers, in opening a correspondence with them, and also in any order they may afterward give, will state that they saw the advertisement in *The Baltimore List*, we will guarantee that they will receive fair dealing in every instance.

Friend B., we have, as you may know, for several years insisted that our advertisers be responsible men. As we once suffered considerable loss, however, because one of our bee-men, who had hitherto been considered good, failed in business, we have thought best to change the wording of our guarantee a little. It is not always an easy matter to draw the line between advertisers who advertise with a deliberate purpose of fraud, and those who lack judgment, and make a failure. The former, we can readily guard against; and we always shut down on the latter when we think the circumstances warrant.

WHAT CAUSES WAX TO CRUMBLE?

I have been trying to make a little foundation, and find, after working my wax a short time, that it gets tender, and crumbles. Thinking perhaps you would be kind enough to tell me what the trouble is, I come to you for information. Would a little paraffine help the matter any? Bees are doing finely.

D. J. SPENCER.

Hartford, O., June 3, 1886.

Wax becomes brittle by working, in consequence of being heated hotter than is necessary; also, after being melted many times over, it becomes crumbly, as you mention. There is no remedy that I know of, unless it be adding a considerable quantity of fresh wax. We have had specimens of wax that seemed about like Indian meal; and, failing entirely to get it to run together, we sold it to the wax-bleachers, to be used for making wax candles. By no manner of means add paraffine. See our caution in regard to its use, in the A B C book.

WHY DO MY BEES BUILD DRONE COMB?

I should like to know how it comes that the bees build nearly all drone combs, or why they do so in this locality. All the new frames that I added to the brood-nest in parent hives had worker foundation. Every time the bees start drone combs, they are storing surplus fast, as there is a great flow of honey here at the present time.

JACOB S. WEIBLEY.

Kistler, Perry Co., Pa., June 5, 1886.

Bees naturally build drone or store comb during a heavy yield of honey, because the same amount of wax and the same amount of labor will contain a greater quantity. Drone combs in the surplus-receptacles will do no harm unless they injure the looks of the comb honey. The remedy is to use foundation, instead of letting the bees build their own comb.

HOW TO GET RID OF DRONES.

Could you tell me the best way to control the breeding of drones? Are the "drone-guards" advertised, good for the purpose? Also what will remove propolis from the hands and cloth covers?

J. H. SCOTT.

Gaylord, Otsego Co., Mich., May 21, 1886.

The drone-guards are exactly the things, friend S. Printed directions on the paper that is wrapped around them will give you all the instructions you need. We control the breeding of drones by the use of comb foundation.—The best thing to remove propolis that we know of is a soap that we advertise for the purpose, called "scourine." Benzine will also readily dissolve it, but it is dangerous to have about. Notice what friend Terry has to say about the use of gasoline.

WAS THE QUEEN LOST IN THE SWARM? OR WHAT MADE THEM ACT SO?

I had my first swarm yesterday morning, and I want to ask if I did right in the way they were hived. The bees flew around near the hives for about 20 or 25 minutes, then went in the direction of a small swamp, and first alighted on a board walk that crosses this marshy ground. They were not in a compact mass, but scattered over a distance of three or four yards. I tried to sweep them into a cloth, but did not succeed. They then went about 15 yards, and alighted on the grass at the edge of the swamp, in about 10 or 12 bunches about the size of large potatoes. I succeeded in getting them hived by placing over them a part of an old box hive. They would crawl into this, then I would shake them in the top of the hive; I got them all in except a few scattering ones, then moved the hive about 300 feet away on the other side of the house; but in half an hour they had left the hive, and I can not say where they went. I thought they had gone back into their old hive, as there seem to be as many bees there as before, and that the queen was lost in the swamp. Did I do right in hiving them before they were in a compact bunch?

O—JOHN L. KUGLER, 4.

Philadelphia, Pa., May 24, 1886.

Friend K., I think I should have waited until the bees collected in one compact cluster. This would be an indication that the queen was with them. Whenever there is any doubt about having secured the queen, a comb containing some unsealed brood should be given, or they will surely desert just as yours did.

TRANSFERRING FROM LOG HIVES; ALSO A KIND WORD.

We take pleasure in acknowledging the receipt of the goods sent us. We now thoroughly understand the one-piece section, and say they gave perfect satisfaction. We started in the fall with 25 colonies, nearly all in hollow log hives. We lost 2, and have now 23 colonies. We transferred into the chaff simplicity hive. Some of our old hives were hollow gums, and could not be split; so in order to transfer them we laid them on the side and nailed strips along them so as to guide the saw, and sawed them open with a cross-cut saw. We have 408 sections in 17 colonies, most of which will soon be ready to take off. We live almost on the backbone of the Alleghanies, where the mountain-sides and deep ravines

are covered with locust, poplar, basswood, etc., and we find the bee-fever is a little contagious among those who come near enough to see the sections filled with beautiful white comb honey, ready to cap over within three to five days. As a remedy for their disease, we have advised them to take GLEANINGS. Don't you think it would help them?

HOUGHINS & HUGHES.

Pipestem, W. Va., June 7, 1886.

CENTRAL VIRGINIA FOR BEE-KEEPERS.

I have long wanted to write a few lines, showing our bee-keeping friends the advantages of this section. In a few words I will tell the facts. We have a mild and healthy climate; pure air, and an abundance of excellent water; freedom from malaria and mosquitoes; soil good, and easily worked, and not liable to droughts, though much of it is stony and hillsides. Apples and pears grow finely and of excellent quality; peaches grow well, and yield excellent crops when not cut off by frosts. Grapes, and all the small fruits, do admirably. Roads and schoolhouses are already built. Bee-pasture is in abundance, and mostly going to waste for want of apiaries. Much of the above applies to the whole of the Blue Ridge, though some localities are better than others.

There are two points worthy of regard—the difference of elevation of the hillsides causes a lengthening of the flowering season. From our house to the foot of the hill (three miles by the road) makes a difference of ten or twelve days in the blooming of the yellow locust, thus prolonging the honey-gathering days; and then the tenacity of the seeds of the red clover. I have plowed under the second crop of clover when the seeds were ripe; cultivated two crops of corn on the land, then plowed the third year, and raised an excellent crop of hay without sowing any more seed, and this can be done, rotation after rotation, with clover, corn, wheat, or rye, indefinitely. Catnip grows on all our hillsides. Raising fruit is done very profitably, and land can be bought so cheap that I believe a good investment would be to pasture sheep, raise bees, and let the yellow locust grow up spontaneously till they are large enough for fence-posts.

A. H. VAN DOREN.

Liberty, Bedford Co., Va., June, 1886.

HOW TO USE THE JONES GUARD.

You say in your catalogue that the Jones bee-entrance guard can be fixed over the entrance when the drones are all out, and at night destroy the drones. Now, I should like to inquire if there ever is a time when the drones are all out; and if so, when is it, and how early in the season will it do to destroy them?

A. J. W.

Macedon, New York.

During the warm months of the year the drones begin to take their flights from the hive about 1 P. M. By half-past one, most or all of the drones will be out; so if the guard be attached to the entrance soon after, the returning drones will be shut out, and may then be disposed of. The few remaining drones, if any, will be young drones, and can be gotten rid of in like manner. If more convenient, having found the queen, all the bees can be shaken off the combs in front of the entrance. The workers will readily pass the guard, and the drones will be excluded. See page 461.

THE MARKED SUPERIORITY OF ITALIAN OVER BLACK BEES FOR WORKING ON RED CLOVER.

I have noticed lately in one of the bee-journals that some writers go back on red-clover bees, and say that the idea of such bees is all "bosh;" and as I have had some experience in the matter I will just throw in my "mite." While living on a new place, some nine miles from here, I seeded six acres of fallow ground with "mammoth" red clover—not peavine. It caught well, and the next year it was a perfect sea of bloom, and at that time there were 3 colonies of Italians and 75 colonies of blacks in the neighborhood. When I cut this clover the bees were at work on it vigorously; and by actual count by myself and hired help there were five Italians to one black bee. We counted the bees in a number of places in the field, and found them to average as above. I would give \$25.00 for a colony of bees that would work on red clover as vigorously as did those. These bees were raised from a queen sent out by Mr. M. Quimby, just about the last of his shipping queens, and they were the prettiest Italians I ever saw.

GEORGE A. WRIGHT.

Glenwood, Susq. Co., Pa., June 2, 1886.

HOW DO BEES CARRY WAX?

Is it a fact, that the bees use their pollen-baskets for the purpose of carrying wax as well as pollen? I was greatly amused several days ago at a sight I never saw before. When I was putting on my surplus boxes the fdn. dropped from one of them, and so I laid it on top of one of the hives. As I was passing that way later, my attention was called to the hive, where I discovered several bees at work on the piece of fdn. They would nibble it off with their mandibles, and then pass it back to their pollen-baskets, and put it on so that it would stay there. I noticed they worked at the fdn. all the afternoon.

The prospects for a good honey-flow were never better in this section than at the present time. The season is about two weeks earlier than usual. My bees are all very strong, and are gathering honey slowly; but I expect in a few days that they will begin on the white clover, which is just blooming out. Now, while we in this section do not have such honey-flows as we read about in GLEANINGS, yet I had one colony store 40 lbs. of clover honey in 1-lb. boxes. I often see in GLEANINGS where yourself and others speak very highly of clover and basswood honey. In this part of the State we have an abundant flow of honey from a small white flower which surpasses all clover or basswood honey I ever saw. It is a wild shrub, and blossoms in August. I may send you a sprig of the flowers, if I have time to get them, and box them up when they are in bloom this summer, and perhaps some of the honey too. I am sure you will pronounce it excellent, as my customers all do.

10—GEO. W. BENNETT, 15—33.

New Bedford, Mass., June 7, 1886.

Friend B., the matter you mention is not at all new. Bees will often stop work right in the height of basswood and clover bloom to collect wax, in the way you mention. I am inclined to think they use it as they do propolis; and I have imagined that they become more eager for gathering wax, varnish, resin, or different kinds of gum, when we begin to have cold nights. It seems to me that they begin to feel an instinct

prompting them to shut up cracks before the approach of winter. Perhaps you had been having some approach to cool nights about the time you wrote, and this set the bees in a mania for hunting propolis.

HYBRIDS — AND WHAT IS A HYBRID BEE?

If I understand rightly, an Italian hybrid is the result of a cross of a pure Italian queen with a black drone, and that her drones are pure Italian. Will the drones from her daughters be pure to cross with Italian queens? Are the progeny of a black queen crossed with Italian drones, as cross and as good as the others?

F. CLARE.

L'Original, Ontario, Canada, June 9, 1886.

Friend C., the theory is, that the drones produced by a pure queen, even though she be impurely mated, will be pure, or full blood; and I believe all careful experiments corroborate this theory. In view of this, the drones from a black queen mated with an Italian drone will be pure black drones. As to whether the workers will be any different in the first case from those in the second case, is a question. We have very carefully watched the habits of hybrid workers from pure black queens and pure Italian queens. There seems to be little if any difference.

BASSWOOD ON SANDY SOIL.

Will you or some of our bee keeping friends tell me how basswood will do on sandy soil, as I think of starting a grove on sandy land? Maple, and such trees as walnut and locust, grow well here.

ELMER SKINNER.

Morocco, Newton Co., Ind., May 23, 1886.

Friend S., we find basswoods growing naturally on all kinds of soil, although I think they thrive best where the ground is somewhat low or damp. On this account they seem to thrive better in dense forests, where the sun does not strike near the root. We seldom see good strong thrifty basswoods on high hills, unless near springs.

CALIFORNIA BEES PROHIBITED IN CERTAIN FRUIT-BELTS.

Here we are, only thirteen miles from the beautiful city of Los Angeles, of which we had heard so much, but had never seen; while away in the distance we view the snow-capped peak of "Old Baldy," which reminds us of "Old New York," our old home, three thousand miles away. Although I am but 19 years of age, I have read GLEANINGS for three years, and could not get along without it.

Bee-keeping is prohibited in the fruit-belts, owing to the alleged injury to the fruit, done by the bees. As I have been in the fruit-region only, I have seen but few bees, and consequently I am unable to give you a satisfactory idea of the trials and tribulations of the Californian apiarist; but as I intend to travel from Los Angeles to San Francisco on horseback, I shall probably see a great many bee-ranches, as they are called here, and shall then be able to tell you about bee-keeping here.

To those who are thinking of coming to California to reside, I will say, Come and see the country before you bring your family, for no description could convey to you a correct idea of this country, as it is so entirely different from the East that it seems like another world. People here speak of the East as "The States."

C. E. HUTCHINSON.

Fulton Wells, Cal.

A "DRONELESS" COLONY.

I have a hive of bees that are droneless. They were a late swarm last year, but did nicely, and are still growing. They are getting to be "immense." Will you please inform me as to the probability of their swarming without drones? I have looked the A B C book through, but do not find anything upon that point. Can there be any thing done to encourage them in swarming? N. C. ARNOLD.

Wilson, N. Y., June 14, 1886.

Why, friend A., that is a new idea. We have heard of *queenless* colonies quite often, but I don't know that I ever before heard of *droneless* colonies. To be sure, they will swarm, and it won't make a bit of difference about their having no drones. If you will examine the A B C book further you will notice that a queen rarely if ever mates with drones of her own. Nature has wisely arranged it so that she can not do it; therefore your bees are all right without any drones. If you had a whole apiary without drones, it might be a little different; but this, I believe, never happens.

WILL TRANSFERRING START SWARMING? OTHER QUESTIONS BY A B C SCHOLARS.

We began the season with eight strong colonies, six in box hives and two in Simplicities. We have transferred one, and have had four swarms up to date. Just as we got through transferring we looked up and saw a large swarm settled on a small apple-tree, a short distance from where we were transferring. We do not know whether the bees came from the hive transferred or from some other hive. We should like to know whether transferring will cause immediate swarming or not; or would they have swarmed anyhow in a short time? The swarm is doing better than the transferred colony. Our bees are all blacks, and we want to know if we can not run them for honey while the honey season lasts, and then get an Italian queen and Italianize them all. We are members of the A B C class.

We read Mr. Doolittle's article in regard to how to get honey into the sections. Now, that is our difficulty here. What would be the best plan to get honey put in sections in the Simplicity hives? How do you make dummies? I will also state that our bees wintered well in the open air, both in the Simplicity and in box hives, without any protection.

S. L. & I. E. PHILLIPS.

Fairburn, Ga., May 3, 1886.

I do not think, friend P., that transferring would be apt to induce swarming, but on the contrary. It might, however, induce the bees to abscond because they were displeased with so much changing and handling. I should suppose you could tell whether the swarm you mention came from your transferred hive or not, from the amount of bees remaining.—We do not use dummies. A chaff division-board would probably answer the same with the Simplicity hive.

A SWARM CHASING A TWO-WHEELED "SHAY."

A friend of the writer, while visiting in Maine, on the Androscoggin River, saw a swarm of bees on the wing, whose course seemed to be directly across a bridge over the above river, and just ahead of them was an old-style 2-wheeled "shay," containing an old gentleman and his wife. The vehicle was wide, and the back open, and the occupants were

sitting so there was quite a space between them. My friend was quite interested to see if the bees would turn out for the chaise, as their course seemed to be directly for the open window, and just then they went through the open space between the couple, and out in front over the horse, and alighted on a tree near by. The lady was on the ground in an instant, with the greatest bewilderment at what had happened; but no harm was done, and the bees soon went into a hollow tree close at hand.

HOW A BEE-MAN RECOVERED HIS WINTER LOSS BY LETTING HIS BEES "SLIDE."

While visiting in my old home, Virden, Ill., about a year ago, a friend where I stopped lost some 18 swarms the winter before, and had but five left alive. We must call him a rather negligent beekeeper, for he left his hives of empty comb standing on their summer stands all the spring. At swarming time, eight of those hives were occupied by absconding swarms. He saw two swarms come from a westerly direction and go into two of the hives, without alighting. The other ten hives were filled by his own bees, so he is sure none of the eight were from them, but must have come from a distance. J. L. PEABODY.

130 School St., Lowell, Mass.

Friend P., the facts you give us throw additional light on this matter of decoy hives.

IS IT ADVISABLE TO SELL BEES AT AUCTION?

I now have 63 colonies, and they are doing well. I think I shall increase to about 80, and then stop. My plan for strengthening weak colonies is the same as yours. I built up about ten, some of which were very weak. I go to a strong swarm and hunt the queen, and set her and the frame back, and then lift out a frame full of bees and brood, and give it to the weak colony. It works like a charm. If they quarreled any, a little smoking made them agree. Most of the time they seem glad to have company.

I think I shall sell off all of my bees this fall. I want to travel next summer for my health. Which would you advise me to do—sell them at a public sale, or try to sell them any way I can? I want to sell out, not because they don't pay, for they do pay, and pay well.

I bought three settings of Pekin duck-eggs, and I got 18 ducklings. They are four weeks old, and I have all 18 of them yet. This spring I raised seven young canaries. I tell you they are beauties. They are cute. I have 140 young chickens and 116 old ones. The two first hens I set, I gave them 30 eggs, and they brought out 28 chickens. I do all of my housework with the bees and ducks and birds and chickens. Don't you think I have enough to do?

MRS. MALINDA A. WILKINS.

Seneca, Kansas, June 8, 1886.

As to whether you should sell your bees at public sale or otherwise is a matter that somebody in your immediate locality can answer better than we can. I think perhaps if you advertise them in your local paper you might realize more from them than by public sale.—I should think you had done extremely well with your poultry business, with the other work you mention. We have been greatly delighted with a brood of Pekin ducks, but we have not succeeded as well as you have in raising them all.

HOW SHALL WE KEEP POLLEN OUT OF SECTIONS?

My bees want to put pollen into sections all the time when they work on white clover. They will put it in nearly every one when making worker comb, and some in drone comb. I use a honey-board over the frames. I wish C. C. Miller would tell us how he keeps it out, as he lives in a white-clover section. I believe the bees gather so much that they don't know what to do with it. I have known them to store it 12 inches above the brood. Bees are swarming, and work in the boxes quite well. The weather is very dry, and has been for some time.

HENRY WILLSON.

Clinton, Ill., May 2, 1886.

As a rule, the use of separators discourages the queen from going into the sections, and, as a consequence, little if any brood is stored in them. I think your experience is a little unusual.

HOW TO CONSTRUCT A HONEY-ROOM IN THE GARRET, FOR BEES.

We have just had a flood, and I had to take my bees up stairs. I set them at the windows, and they did all right. I have your A B C book, and have looked through it thoroughly, and have failed to find out how to make a large bee-hive or a small room to put a hive of bees in, and take off the sides of the hive, and let them build comb to the sides of the room, hive, etc. You speak of something of the kind under the head of "Bees in Garrets," but how do you get into the room to cut the honey out? I should also feel obliged if you would give me a description of the hexagonal bee-hive on page 223, in A B C book.

HARRY L. COOK.

Chattanooga, Tenn., May, 1886.

I do not know how to direct the making of a bee-garret. The results of investigations, wherever I have found such garrets, have been so unfavorable that I do not believe it is best to spend much time or money on the matter. The Hexagonal bee-hive you allude to was the project of a friend who wanted to see what he could do. The hive cost him something like \$50.00, and I believe it gave him several good yields of honey. We had an engraving of it made, and it was described in GLEANINGS for Feb., 1882, page 62. It is interesting as a curiosity, but I don't believe any one wants many hives of that kind.

DO BEES GATHER HONEY FROM HARD MAPLE?

On page 658, October No., last year, friend Doolittle says that, according to his observations, bees gather very little honey from hard maple, but plenty of pollen. Now, according to my experience the hard maple yields honey abundantly; in fact, I think it is equal to fruit-bloom for honey, and the honey is of better quality. But, of course, as the weather is usually unfavorable during the maple bloom there is comparatively little saved by the bees. I have never experimented as carefully as friend Doolittle; but this I know: We have no willow in bloom when the sugar-tree is in bloom, nor is there any other source where bees gather honey at that time, except dandelion, which did not bloom this year. So while the sugar-trees were in bloom the bees worked with a vim equal to fruit-bloom, and stored considerable honey, although the weather was very unfavorable most of the time during the two weeks they were in bloom, and the honey was of excellent quality.

We can not always compare our localities with others; as, for instance, I see reports from some localities that bees make considerable honey from the goldenrod. Now, two years ago I had a field of eight acres covered with it, and I never saw a bee on a goldenrod blossom in my life.

The season in this locality was a very poor one for honey last year. A great many of our beekeepers did not get any honey at all. My report is as follows: 30 lbs. of comb honey per colony and two swarms. My best colony gave 50 lbs.

Farmington, W. Va.

L. H. WILCOX.

I am inclined to agree with you, friend W., that the hard maple does at times yield considerable honey. Two or three years ago we had a season when the bees were filling the hives with new honey. So much of it was brought in, that, when we turned the combs over to look at the brood, the honey would run out on our clothing. It had the taste, somewhat, of maple syrup; and as the hard maples were just roaring with bees for many days, I decided the honey-flow came from them. Did you taste the honey, and see what it was like?

MRS. AXTELL ON FORMING NUCLEI.

The way I like best to make nuclei is this: Go to my blackest, or poorest and smallest colonies; take out all the combs and adhering bees, and carry to a new hive on a new location, two of which combs I set in the hive; then brush off the bees from the remaining combs into the hive. Now we know we have the queen, and enough of the bees will remain to care for the queen and brood well (as only a strong nucleus pays). Now carry back the other two or three combs to the old stand, and enough bees will return to care for them. If a colony is strong enough, three or more nuclei may be made of the one weak colony. I like to pick out my darkest hybrids or poorest-queened colonies, because I do not wish to raise drones from them. It is the easiest way to get them requeened.

MRS. L. C. AXTELL.

Roseville, Ill., May 26, 1886.

HOW TO COOK CARP.

My husband has been getting some carp from a neighbor's pond, and they are almost as bony as the eastern "red horse," or suckers, and taste very much like them. A good many object to buying them, on account of the bones. As I like the flavor of them, I have tried various ways of cooking them. The best way for us is to bake them. We kill, and clean them thoroughly the day they are caught. They sometimes need washing six or seven times in clear water. Then let them stand in clear water all night. Wash them once again in the morning, and then cut off tails and fins, and pack them heads and tails; that is, as close as I can get them, and about two deep, in a baking-dish of some kind. I use a long dripper. As I pack I sprinkle a little salt and pepper inside them, then put in water until just even with the top of the fish; and if liked, a little nice meat-drippings or butter is added; then bake for two hours, or longer if desired. I do not add any more water, preferring to let them be about dry when done. When so prepared, the bones are nearly all as soft as those are in canned salmon, and they are much relished. If any are left I warm them up in hot lard and a little extra salt.

Los Alamos, Cal.

MRS. J. HILTON.

DOES CHANGING THE INTERIOR OF THE HIVE PREVENT SWARMING?

I am a beginner in keeping bees, and I should like to run them without increase. I have been wondering if I could not do it in this way: After the swarm issues, put all the frames containing brood in lower story, with enough frames of foundation to fill up the lower story. Then put the frames containing honey in upper story, with frames of foundation to fill out the story. I could put a frame of foundation between frames of brood to change the interior of the hive, so that the bees would hardly know it was their old hive. After the upper story is filled, extract.

H. M. PARKER.

Plymouth, Richland Co., O., May 25, 1886.

Friend P., the plan you suggest will be nearly equivalent to reversing the brood-combs, as mentioned on another page by friend Alley; and my experience is, that sometimes it works, and, again, it does not work.

HONEY-DEW, ETC.

I sold 36 stands of bees last year and 3 this spring, and I have 22 on hand at this time, and will not sell any more until swarming is over. I lost none this winter. Bees have been doing well until the last two weeks, when we had a heavy frost that killed all the bloom; but they are coming out again. Last year, and year before last, I had swarms out by the 22d of March. They will be late this spring. They will surely go to swarming in a few days. I have not made any divisions yet, and I don't expect to.

When I get time I will write you a letter on the production of honey-dew, as I am satisfied that I have discovered it, and I should like for you to let me know if it has ever been satisfactorily settled as to what produces it.

J. A. ISAACKS.

Brownwood, Tex., May 1, 1886.

Friend I., I believe it has pretty generally been agreed upon, that honey-dew is the product of aphides, or some sort of insects. The idea that it falls from the air or clouds is too improbable to receive credence, without a very great amount of positive proof. If you have anything new to offer on the subject, we shall be glad to receive it.

HOW SHALL WE SHIP OUR HONEY IN THE QUANTITY?

I do most terribly hate to peddle, so I offered one of our merchants here my whole prospective crop of extracted honey from 40 hives for 8 cts. per lb., and take it all in trade out of his store, he finding a market for it among his acquaintances in New York. He told me to-day, that after several days to think about it, if I would put it in tin pails of about 5 lbs., so that he could crate it and ship it to New York he would accept my proposition. He is hardly willing to take it in barrels. I can retail it from 10 to 12½ cts., a limited quantity, but I do so much like to dispose of a crop in bulk. I want to see what can be done.

FRANCIS TRUEBLOOD.

Archer, Fla., May 21, 1886.

CARNIOLANS IN CANADA.

I have to smile a little at your concluding remarks about Carniolan bees, on page 424. The bees produced by the Carniolan queen I got from J. H. Morrison last September are perfect hybrids in every respect, temper not excepted. Now, how are we to tell when we have pure Carniolans? The old-

fashioned German bees have a grayish appearance, especially when they are young. Can it be possible that we are being imposed upon, and are getting back our old race of bees? I am feeling just a little sorry that I ever got any other race mixed with our Italians. Apple-trees are in full bloom yet, but the weather is so cool there is no honey secreted. The Syrians are terribly cross; but when we are opening hives we can soon tell where there is Italian blood.

ILA MICHENER.

Low Banks, Ontario, May 29, 1886.

CARNIOLANS AS WORKERS.

I am quite surprised at your article in June 15th No., in reference to Carniolan bees as workers. I have had Italians, Syrians, Cyprians, blacks, and hybrids, but I have never yet seen any honey-gatherers equal to the Carniolans I now have. My experience with the race as to gentleness is, that when the queens have mated with Carniolan drones we have the gentlest bees; but whether mated with Syrian, Italian, or black drones, the worker progeny is still gentle and lovely. I believe Dr. Tinker got a queen from me, mated with a Syrian drone; would he be kind enough to report quality of workers? I have never had any other queens so prolific. I see no trait about them but superiority in every way over any other race I know of. I think it is doubted that the colony you reported on is Carniolan. Didn't you report in GLEANINGS, soon after getting them, that you saw no difference between the workers of your queen marked "best," and Italians? Carniolans certainly have no yellow bands.

Oxford, Pa.

S. W. MORRISON, M. D.

Friend M., we were a little surprised to find a few worker-bees from our Carniolan queen yellow-banded; but they came from Frank Benton direct, and he would doubtless send us as good as he had, expecting, of course, we would report. Furthermore, if I am not mistaken, both Mr. Benton and other writers have admitted that a part of these bees are yellow-banded. When I saw this admission I was considerably inclined to feel vexed. Suppose we have the matter decided before we go any further, as to whether Carniolan workers should be yellow-banded or not. If they are not a pure breed at all, will it not be best to drop them right where they are? See letter above.

HOW EASY IT IS TO BE MISTAKEN.

A great many times friends write us that they ordered so and so, and yet they received something they didn't order at all. Now, where no copy of the order is kept, people are usually so positive the mistake is not theirs, I have been obliged to give the clerks particular directions to close up every letter of explanation by saying, "We can return you your letter, should you not think we are correct in the matter, if you so desire." Unless the above is added, there is pretty sure to be hard feelings, and sometimes hard words. The following kind letter illustrates the point:

You can not imagine how good I felt when I received back from you my letter of May 7th, 1886. After waiting, telegraphing, telephoning, and at last paying \$1.30 for freight for the sections, it turns out after all that I am to blame for all of it. To say that I was vexed would be putting it in a very mild way. The reason I feel good now is be-

cause I did not scold you for all this trouble made by myself and for myself. Now, in future I will try to be more careful about what I say. But suppose you had made the mistake, as I firmly believed you had until you returned my letter, what would have been the result? My opinion is, that you would have made it all right. I have all the supplies that I need for this season; but when I need any thing in your line I will order. J. F. MICHAEL.

German, Darke Co., O., June 21, 1886.

I am sure, friend Michael, we are very much obliged indeed for your kind concluding words, and we will try hard to deserve them.

Moral.—When you make an order, always keep a copy, so as to be sure you are not mistaken when you feel like complaining that you didn't get what you ordered.

WHEN TO TAKE OFF HONEY.

I have one of your A B C books, and am pleased with it. Can you inform me where I can find a good market for section honey, and what it is worth per pound? I have fifty colonies of Italians, and they produce a very good yield, but honey is worth only, through this State, 10 cts. per lb. You mention in your book, that you always get 18 cts. for yours. Be kind enough to lend me a helping hand in this direction. How late in the season do you take honey? My plan is to remove from upper story, any time from the first of May to the middle of September, but never take any from the brood-chamber. Please give me your ideas on the subject. You don't mention this in your book. R. H. CAMPBELL.

Madison, Ga., June 19, 1886.

Why, friend C., we continue to take off honey as long as any comes; that is, I should take off every bit in the sections; and if they then lacked in the brood-chamber, when it came time to prepare them for winter I would feed. If you want your honey extra nice, take it off as fast as the sections are capped over. Every day they remain over the bees after this, spoils their appearance.

REPORTS ENCOURAGING.

"BEES DOING FIRST RATE."

BEES are doing first rate here, and white clover is in full bloom. Cultivated raspberries, blackberries, and tulip-trees, furnish lots of honey also. There is only one large tulip-tree within easy reach, but the bees carry in honey from that one an hour or two every morning. ALLEN LATHAM.

Lancaster, Mass., June 19, 1886.

NEBRASKA.

Bees are doing finely. We hope to get some surplus soon. We are in the midst of strawberry picking. We have the finest that go to our market.

Plattsmouth, Neb., June 9, 1886. W. J. HESSER.

WILL QUADRUPE THE STOCK.

My wife is excited over her success with bees. Last year she tripled, and this year she will quadruple her stock (from appearances). They bred all winter; first swarm, May 22d; second, from same colony, June 5th, and will swarm again all round.

SAMUEL T. MALEHORN.

Denmark, Oregon, June 10, 1886.

HONEY NEVER BEFORE COMING IN SO FAST.

Bees are doing first rate now, but I am afraid of dry weather setting in that will cut off the clover. There is an abundance of it. I have taken 40 lbs. of comb honey from some of my hives, and there will be plenty more in a few days. I never saw them make honey so fast before in my life.

Millersburg, O., June 7, 1886. JACOB ETTER.

BEES AT "WORK IN SECTIONS STRONG."

Bees are doing remarkably well so far this season. We are having an excellent clover-bloom, and bees are at present gathering more honey from it than I remember of ever seeing before. They are at work in the sections strong, and are just beginning to swarm. I had two swarms to-day.

Williamsville, N. Y., June 22, 1886. E. C. LONG.

A GOOD REPORT FROM ONE OF OUR DOLLAR QUEENS, AND ONE, TOO, THAT DOES NOT SWARM.

I bought a dollar queen of you 4 years ago, and introduced her to a colony of blacks. In a short time I had a colony of pure Italians, and they are beauties too. They have given 87, 103, 108, and 97 pounds of honey each year respectively. What I want to know is, why they have never swarmed or even built a queen-cell. I know it is the same queen, for I clipped her wing a few days after introducing her, and saw her last on the 11th inst. Is it not strange that they do not swarm? I am very proud of her. C. A. LEWIS.

Peachville, Pa., June 14, 1886.

100 LBS. OF HONEY IN 5 DAYS FROM ONE SWARM; OWES SUCCESS TO THE A B C BOOK.

I have not written anything for GLEANINGS for three years. Your reply at the end of my article was to let you hear from me again. This fall I will send you another report. I have made great strides in the art since I commenced, 7 years ago. I have had great success in getting honey, but not in wintering. Last year, 8 swarms averaged 200 lbs. of extracted honey apiece. One new prime swarm, hived on 21 empty combs, gathered over 100 lbs. in 5 days. I owe much of my success to what I learned in the A B C book. C. S. ADAMS.

Williamson, N. Y., June 20, 1886.

CLOVER TWO WEEKS EARLIER; THE SWARMING MANIA RAGING.

Bees are doing well. White clover commenced blooming May 10th, two weeks earlier than usual, and has furnished a good supply of nectar. Basswood is opening up now. Trees are full of buds; and if the weather is suitable we shall have a good honey-crop, which will be the first within three years. Our woods are full of runaway swarms. Persons keeping a few bees, and not paying close attention, have lost half of their swarms that have come out this season. We have lost three. Two first swarms came out and went to the woods without settling. One was followed three-fourths of a mile. There is something very singular about the swarming this year. We have had one swarm to come out five times. It was hived on brood and foundation. It would stay in the hive two or three days, work out some of the foundation, and then swarm out again. Others will stay in the hive a day, and not do any thing, and swarm again. My hives are well shaded, and the best of care given in hiving. Some swarms destroy all the larvæ given them, if rather young. J. NEEEL & SON.

High Hill, Mo., June 19, 1886.

OUR OWN APIARY.

DOOLITTLE'S PLAN OF FORMING NUCLEI, AS TRIED AT OUR APIARY.

EVER since Mr. Doolittle gave his plan of forming nuclei (p. 304, last year, and p. 401, current volume), I have had a great curiosity to know whether it would work successfully here. As our apiarists have been practicing artificial swarming, I told one of the boys to try Doolittle's plan, and I determined to put it severely to the test. I accordingly instructed him to take six different frames, with adhering bees, from as many different colonies, being careful that the queen was not on any of said frames. These in rotation, as fast as taken from the hives, were shaken over the tunnel, precipitating the bees into one of our 1½-lb. shipping wire-cloth cages. An effort was made to shake all the ragged-winged old bees into the cage, taking advantage of the fact that young bees adhere more closely to the combs. When the cage was filled it contained about a quarter of a pound of bees from six different colonies, making, by actual weight, a pound and a half of bees, a large part of which were old ragged-winged fellows. Among these were dropped a queen from a seventh colony, so that we had seven colonies represented in this cage of bees. We would naturally expect that these bees would be apt to quarrel—at any rate, kill the queen. According to directions, the bees were jumbled up considerably, and then placed in a cool dark place over night, to become acquainted with each other. Next morning they were put in a hive where previously had been put a frame of unsealed larvae and a frame of honey, and two or three empty combs. I watched the bees narrowly, to see whether any would return to their old stands. At noon of the same day, on examining the hive I concluded that most of the bees were still there; but I failed to see many of the old ragged-winged bees. I then concluded that they had gone to their old locations.

At 7 P.M., on looking into said colony, I was gratified and surprised to find that those same old ragged-winged bees were all there, they having evidently at noon been out foraging, and at night were at home. Yes, those ragged-winged old fellows were scattered all through the hive, and the queen was in the center of a ring of bees, unharmed.

Now, if, by the ordinary way, these six frames of bees had been put directly together in some one hive, the old ragged wings would all have returned to their old locations. Isn't that so, friend D.? Besides, if the queen had been dropped right among them, as she was in the cage, she probably would have been killed. I don't know whether or not friend Doolittle has tried forming an artificial swarm from so many different colonies, but I felt sure that if it would stand this test, his plan ought to work successfully, as ordinarily practiced by him. I am aware that it involves considerable labor; but the point is, if I understand correctly, to make all the bees stay at their new location, and perform, as nearly as possible, the functions of a natural swarm.

Of course, I would not say that, because this one instance has proved successful, therefore the plan will always work. We shall try it again, and will report later. Well, suppose it will work successfully every time, will the consequent labor involved

pay you for your trouble? This you will have to settle for yourselves. Mr. Doolittle has practiced it for a couple of years back, and I believe he still considers it the most economical way of forming nuclei or strengthening weak colonies. Mr. Fowls, of Oberlin, O., said he had met with good success by it, and thought it one of the valuable "kinks" to the trade.

WHAT FUEL IS BEST FOR SMOKERS? THE FUEL THAT WE NOW PREFER AT THE HOME OF THE HONEY-BEES.

Among some of the practical ideas in Mr. Heddon's "Success in Bee Culture" we find planer shavings mentioned by "my friend," and recommended by Mr. Heddon as being the best fuel for smokers. The boys tried this fuel, prepared in the way described; but while they met with fair success, the shavings burned out too quickly, and sometimes went out altogether. No doubt, with the Bingham smoker, this fuel will do all that is claimed by Mr. Heddon; but with the Clark, the *modus operandi*, by reason of the difference in draft, has to be varied somewhat.

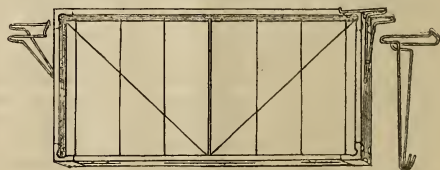
HOW TO MAKE THE CLARK SMOKER RUN FROM FOUR TO SEVEN HOURS IN THE APIARY WITHOUT REFILLING.

One of the boys then substituted, in place of the shavings, fine basswood sawdust; and, strange as it may seem, it gave excellent satisfaction, burning for a great length of time, and sending out a volume of smoke. The manner of filling is simply to put a few live coals over the grate (holding the nozzle downward), and then filling the fire-box level full with the fine basswood sawdust, such as comes from sawing sections. The smoker, as thus loaded, will last from four to seven hours, depending upon the amount of wind blowing. If the air is still, and the smoker is filled just right, it may be expected to run for a long time without refilling. We much prefer basswood sawdust to pine, as the latter is too apt to fill up the tube with tar. I suppose any hardwood sawdust will answer as well as the basswood.

The secret of the sawdust lasting so long rests in the fact that sawdust will smoulder for a great length of time, without going out. When our honey-house caught fire, something over a dozen years ago, we discovered that the fire originated from the sawdust packing holding fire for a whole day and night, and I believe other fires have been traceable to the same cause.

THE SIMPLICITY REVERSIBLE FRAMES.

We have tried a number of these frames, with excellent satisfaction. They reverse surprisingly easy, even when covered with propolis; and for general handling, the boys like them much better than the knife-edge metal corners. To hold a frame filled with honey by these metal corners, is sometimes a little uncomfortable to the fingers. These reversible wire corners are easy on the fingers, and at the same time possess all the good features of the old metal corners. For the benefit of our readers who may wish to see it, I here reproduce it.



THE SIMPLICITY REVERSIBLE FRAME.

The cut will, I think, make the principle plain. To reverse, the corner is slipped off, and is then revolved to the other corner, where it is slipped into place.

I must say, from my experience I am greatly pleased with the reversing principle. We have secured by it some as fine combs as I ever saw, the frames being filled out solid from bottom-bar to top-bar. Even with wired frames the bees will scarcely ever build the comb plump against the bottom-bar. Near the lower end of the comb the bees are apt to gnaw around the wires. Frames of this description have been reversed, and the combs then completely filled out in a day or so. If we continue to like this reversing principle, we shall use it entirely in the apiary. We already have quite a number in use. From the experience I have had I do not think I should like to reverse the whole hive; i. e., all the frames at once. On examining into a number of hives, I saw some combs which needed reversing, when, to reverse others in the same hive, would only result in harm—at least, so it seems to me. To reverse the frames singly is not a very long operation.

I should still advise the friends who have had no experience with them not to put too many reversing frames in the apiary at once. Although many like them at present, we may all decide adversely to them in time.

CARNIOLANS STILL LAGGING.

These bees are not doing much better. Although by all odds the strongest colony in the apiary, they have no more honey in their hive than ordinary Italian nuclei. Two of the frames of foundation which I told you about last issue have not yet been pulled out. Such a strong colony, in the space of two weeks, during the honey-flow, ought to have had the fdn. drawn out long before this. I will say to Dr. Morrison, that the bees in question are from a Carniolan queen which Benton called "very fine." There are only a few Italians among them. As we have been expecting them to swarm, we have attached to the entrance one of the Alley traps, both to catch the queen in case the swarm issues, and to catch all the drones, as we do not wish to have any of their flood in our apiary.

This morning the apiarist found a young virgin queen trying to pass the trap attached to the Carniolan swarm. She made repeated attempts to get through, but without success. The apiarist then took her away after the bees had balled her. This shows that even young queens can not pass the zinc, so that there is no doubt, when the Carniolan queen comes forth with the swarm, she will find that she is "left."

HUGHRAH FOR THE ALLEY TRAP.

Later.—This afternoon, at a quarter before four, while in the apiary I saw a big swarm in the air. Going directly to the Carniolan swarm I found the bees pouring out of this hive through the trap. Yes, sure enough, there was the queen in the upper apartment, where she had passed through the cone when she found herself unable to pass the perforated metal. The bees circled around in the air for about five minutes, when, finding their queen absent, they poured back into the hive through the trap amazingly quick. I had nothing to do but to watch them. It works about the same as clipping the queen's wings, with the exception that you do not have to hunt for the queen. The trap is automatic, and is, no doubt, a great saving of labor. If I had

wished to put the swarm in another hive, all I should have had to do would have been to detach the trap from the hive and suspend it in the air. The bees would soon have clustered around their caged queen, and I could have put them wherever I pleased.

I would say, that we do not ordinarily allow swarming; but I had made the conditions favorable for the issue of this swarm for the express purpose of testing the trap. This invention of Mr. Alley's will prove a great boon to those who have apiaries located in different places, and where they have to hire expensive help to take care of the swarming.

ERNEST.

GLEANINGS IN BEE CULTURE.

Published Semi-Monthly.

A. I. ROOT,

EDITOR AND PUBLISHER.

MEDINA, O.

TERMS: \$1.00 PER YEAR, POSTPAID.

For Clubbing Rates, See First Page of Reading Matter.

MEDINA, JULY 1, 1886.

I am the light of the world.—JOHN 9. 5.

WE have, at this date, June 29, 5623 subscribers. We are also filling all orders almost the day they are received. If any one has been missed, let us know and we will fix it instantly.

MR. THOMAS HORN AND HIS BUSINESS.

WITH the number of complaints we are having, it is no longer possible for us to keep silent, although it is my opinion that Mr. Horn means to make every thing satisfactory with his customers, when he gets through with his great rush of orders. The only thing we can blame him for is, that he does not return the money promptly when his customers write that they prefer it instead of waiting longer. We wrote him that he must either return the money or make some explanation to his patrons, that we could publish, before this issue went out. In reply to this we get the following telegram:

Can not attend to mail myself—orders are positive to return if not filled. If not, answer. Please write again—letter to-day.

Sherburne, N. Y., June 29, 1886.

THOS. HORN.

SECRET SOCIETIES.

WITHOUT presuming to dictate, I feel it nevertheless my duty to say that, when my advice is asked, I do not hesitate to reply that I can not see any need at present of secret societies of any kind. Especially does it seem to me that one who professes to be a follower of the Lord Jesus Christ has no need of secrecy in this way. Jesus taught openly. I am well aware that many professors of religion are members of secret societies of different kinds. I know, also, that our young people, many of them, are members of secret societies that claim to have as their end and aim the furthering of the kingdom of God; but for all that, I feel a little sad and a little afraid when I hear that any young friend of mine has become a member of any of these. Our prayer-meetings are not only open and free to all, but every true Christian is always glad to welcome the pres-

ence of any human being, no matter what the color, sex, or social condition. If we are seeking first the kingdom of God and his righteousness, is there any need of secrecy anywhere in this wide universe? Shall we not so live that we shall never be afraid to have the all-seeing Eye look down into the innermost depths of our own hearts? and shall we not also so live that we need never fear to have human eyes look into the business of our lives, and even scan closely the work of our hands? "In secret have I said nothing," are the words of our Savior.

HAND-BOOKS ON RURAL INDUSTRIES, AND WHAT THEY SHOULD COST.

ONE of the things to rejoice about during this nineteenth century is the fact that almost every thing is taught in books; that is, a whole book is written in regard to potato culture, and another on cranberry culture, a third one on broom-corn, etc. Not only have we *poultry*-books, but we have a book written specially in regard to the *Light Brahmas*; and these text-books are a wonderful help in their respective lines of business. But what I want to protest against in this brief notice is, the fashion of advertising a "book," charging 25 or 50 cts. for it, and sending, in return, a brief pamphlet that should be sold for a nickel or a dime. Three books are now being advertised extensively in the agricultural papers, on celery culture. One is 25 cts.; the other two, 50 cts. each. Now, a book on celery culture is very much needed, and I have sent for every thing that has come out, just as soon as I saw it advertised. The 25-cent one is by J. N. Stearns, Kalamazoo, Mich. The title is, "Celery Culture." Said book has a cover 4x6 inches. Inside it are six leaves, 4x6 inches. One of the 12 pages is occupied by an advertisement of something foreign to the subject. The type is large and widely displayed. Every thing in the book would not make a single page of GLEANINGS, and yet it is advertised and sold for 25 cts. The other two, at 50 cts. each, are entitled respectively, "Kalamazoo Celery," and, "How to Grow Celery." One contains 23 pages; the other, 30; size of the books, 4½x7 inches. The matter is tolerably fair, what there is of it; but there is not a single illustration to explain the operations of celery culture, in any one of the books. Ten cents would, in my opinion, be an ample price for them. Of course, these books will be short-lived, and the sale of them limited. Instead of being treasured up as something of value, they will be torn up or lost, or go into the waste-paper basket in a week or two. It is true, they may be worth all they cost to many of the purchasers; but to my notion it is not *right*, and it is not *fair*. If the advertiser should, in his advertisement, say how large his "book" is, and tell the number of pages it contains, he would find hardly a purchaser. Large books are not needed on many of these subjects; but why can't we have something like a uniform price, even on industrial pamphlets? And why not call them so, instead of calling them *books*? Perhaps you urge that it would not pay; but I reply, it *will* pay a fair and reasonable profit to get out a good book, full of pictures, illustrating the subject, and sell it so as to furnish the purchaser, say a good-sized page (the size of GLEANINGS, for instance), at the rate of a cent a page, or not to exceed that price. Industrial hand-books can be furnished at the above figures, so as to pay reasonably well, I know, because I have tried it,

BOOK-REVIEW DEPARTMENT.

DOES IT TAKE TWENTY POUNDS OF HONEY TO MAKE ONE POUND OF WAX?

MR. P. L. VIALLO, Bayou Goula, La., criticises somewhat my conclusion in this department of May 15, as regards the original cost of wax, as adduced from the consequent consumption of honey. As he mentions some of our time-honored experimenters and writers who have given the matter some attention, I insert it below, that we may together consider what he has to say:

Mr. Ernest Root.—In your book-review of May 15, you say: "From the fact that McLain's estimate of the cost of wax is backed by former experiments some years ago, it would seem that 20 lbs. of honey to 1 lb. of wax is very nearly correct." Don't you think that you are rather premature in coming to this conclusion, for McLain's estimate, based only on opinion, as far as I can see, is given as such? You also refer to the paper read by me at the convention in New Orleans, and say that I "gave as my opinion," etc. I think that it would have been better to say that I gave my *modus operandi* and the results of my experiments, etc. Now, as you have put me in evidence showing the great difference between Prof. McLain's opinion and the result of my experiments, which will, no doubt, cause critical reflections, and wishing to verify my experiments to a certain extent, I would call your attention to the experiments of Berlepsch and others in Europe; and among our prominent bee-keepers here, Mr. C. Dadant says about 10 lbs. of honey is required, basing his opinion on the amount of grain required to produce 1 lb. of fat in animals. If you read friend Doolittle's article in the *C. B. J.*, May 26, you will see that he says that it takes less than 5 lbs. of honey to make 1 lb. of wax, when bees are not confined, and have access to plenty of pollen and water from the fields, etc. If I am not mistaken, Mr. J. Heddon's estimate is not far from the above. P. L. VIALLO.

Bayou Goula, La., June 3, 1886.

I am very glad, friend Viallon, that you have spoken so freely, if I do seem to be "waxed pretty bad;" but as nearly as I can discover, McLain is backed by former experimenters, and it was the most natural thing in the world to conclude that the old estimate was nearly correct. You say I ought to have given the results of your experiments. If you will look again, page 392, you will see that I did put it as the results of your experiments; namely, 7 lbs. of honey to 1 lb. of wax. From the reading of McLain's report I had supposed that the professor had arrived at his conclusions from experiments; quoting from his report we find the following: "Estimates can easily be furnished to prove that the production of every pound of wax costs the bee-keeper ten times the sum realized from its sale." I take it from this that he had made some experiments as regards the cost of wax.

On consulting several of the bee-books I find it seems to be presupposed that it takes from 15 to 25 lbs. of honey to make one pound of wax. Whether these data were obtained from actual experiment of the authors, I am not prepared to say. If the results of your experiments, friend Viallon, are correct, then these books need revising on this point.

As we have here on file all the bee-journals since started, I took a little search in some of them. Turning back to the *American Bee-Journal* of 1861, Vol. I., page 88, we find there recorded the experiments of Gundelach and of Baron Berlepsch. In the second paragraph we find: "Gundelach made some minute and careful experiments, the details of which are given in the 'Natural History of the Honey-Bee,' and the results showed that about 20

lbs. of honey were used by the bees in producing a pound of wax." Again, in the third paragraph occurs the following: "A similar experiment" (referring to the one just quoted) "with like results was made by the Baron of Berlepsch. In a subsequent experiment he allowed the bees free access to pollen, and ascertained that, in such case, 13 lbs. of honey (exclusive of the pollen consumed) sufficed to produce a pound of wax." The above are verbatim quotations. Remember we are not talking about the amount of *pollen* and honey required for a pound of wax, but *honey* alone. The pollen in the last experiment probably accounts largely for the difference in results.

In the same article, further on, we find: "Again, Count Stosch, taking the second experiment of the Baron of Berlepsch as the basis of his estimate, thinks due allowance should be made for the time spent in comb-building by the bees, and which, if devoted to honey-gathering, would have enabled them to store up 20 lbs. Hence, he concludes that, with the actual consumption and the necessary allowance for time and labor, the cost of a pound of wax is fully equivalent to 30 lbs. of honey."

If I am correct, the foregoing extracts refer to the German friends Mr. Viallon has in mind, but I do not see that the "results" of their experiments particularly favor him, but rather verify what Prof. McLain has said. If our German experimenters have made any more recent experiments, the results of which are radically different, I should be glad to be informed of it.

Mr. Dadant is quoted as saying 10 lbs. of honey only are required for one pound of wax. As he obtains this estimate from the quantity of grain required to make a pound of fat, it seems to me this estimate bears the force of only an assumption. The fat of animals and the wax of bees may be similar, but I do not see how the proportion can hold true, if we reason that corn is to fat as honey is to wax, which, when sifted down, amounts to about that. It may approach the truth, but not accurately, or, at least, so it seems to me.

Mr. Doolittle is mentioned as saying in the *C. B. J.*, page 166, that only 5 pounds of honey is required for 1 pound of wax; but, observe, he gives it as his *opinion*. He states the reasons for his belief, but using Viallon's terms, not the *modus operandi* or the results of his experiments, strictly speaking.

Now, friends, while I confess I had just a "leetle" desire to talk back to friend Viallon, it is not my purpose in making these extracts and allusions from some of our prominent writers to show by their use that the results of Viallon's experiments were incorrect, or that Doolittle was wrong in his belief; but to show from various sources, so far as I was able, the result of previous investigation upon the one point of the *original* cost of wax. Indeed, I would regard it as presumption to take issue with some of the old writers who have long been in the field. My object is to call forth a settlement of this "wax question," if possible, as proven by a series of careful and impartial experiments of the present time. Wax has now become one of the staple articles of commerce, and I regard it highly important that bee-keepers know pretty nearly what it will cost them to produce it when honey is of slow sale. If it can be produced at a cost below the market prices, then surely we ought to know it. Several have inquired whether they could produce and sell wax at a profit. Perhaps with the knowledge of what has been done

we can prove that the original cost of wax is considerably lower than the old estimate. Strange as it may seem, I sincerely hope it may be demonstrated, for it would develop a new income for the bee-keeper; and it is quite probable that, as Mr. Doolittle suggests, when the bees have access to open air we may arrive at quite different results.

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EXCHANGE DEPARTMENT.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 5 lines, and you must say you want your ad in this department, or we will not be responsible for any error. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates.

WANTED.—To exchange 20,000 strawberry-plants, Crescent Seedling, Cumberland Triumph, Sharpless, and Glendale, 75 cts. per 100; \$4.00 per 1000, for bees, foundation, or improved poultry.
10tfdb W. J. HESSER, Plattsmouth, Neb.

WANTED.—To exchange for extracted honey, cash or offers, 15,000 pot-grown strawberry-plant of the best varieties; also game cocks and Jersey Red pigs. Can give best reference. 12-13d
Address GEO. M. WERTZ,
Johnstown, Cambria Co., Pa.

WANTED.—To buy for cash, from 100 to 500 pieces, either pine, poplar, or basswood, 7 feet long, 3½ inches wide, 1¾ inches thick, planed all over, with a rabbit taken from one corner 1¼ inches by ½ inch. Who can furnish them?
12-13d THOS. W. CROACHER, New Bedford, Mass.

WANTED.—To sell, after June 1st, 50 3-frame L. size nucleus colonies of hybrid bees, with queens, for \$3.50 each, delivered at Plattsmouth, Neb., or I will exchange for young stock, cattle or horses, or apiarian supplies.
12tfdb J. M. YOUNG, Rock Bluff, Cass Co., Neb.

WANTED.—To sell or exchange a farm, 160 acres; good buildings, good soil, good title. All under fence. For sale at a fair price. Address 12tfdb
W. B. BROWN, Spirit Lake, Dickinson Co., Ia.

WANTED.—To exchange Gale plow, square harrow, subsoil plow, double lead harness, riding-saddle, horse-clippers; also a Stevens 44 rifle and 12-gauge shot-gun combined, for Barnes saw, hives in flat, or offers. Goods shipped from Philadelphia, Pa.
12-13d H. M. HIESPELL, Paola, Fla.

WANTED.—To exchange five full-blood Scotch shepherd pups for \$5.00 in cash each, or six warranted Italian queens. Stock warranted full, and satisfaction guaranteed. Address
13d T. J. PENICK, Williston, Fayette Co., Tenn.

WANTED.—To exchange Italian bees in three-frame nucleus with queen, at \$3.50 each, for fdn., brood size, 8x16½. Also young queens at \$1.00 each.
13-14d M. ISBELL, Norwich, N. Y.

WANTED.—To exchange Italian and hybrid bees for pure beeswax comb fdn., Wyandotte, Brown Leghorn, and Plymouth Rock chickens, or offers.
13d A. E. WOODWARD, Groom's Corners,
Saratoga Co., N. Y.

FOR SALE or exchange, White English Rabbits, choice stock very low, now; also P. ducks and poultry cuts for sale cheap.
13-14d O. L. COVER, Covington, Ohio.

WANTED.—To exchange bees in Root's Simp. or chaff hives, or a saw-table with \$7.00 mandrel, suitable for power, for a Barnes foot-power circular saw, or will sell cheap for cash.
13-16db M. LUDTMAN, Hannibal, Monroe Co., Ohio.

FOR SALE.—Italian Bees and brood. Queens bred from imported mothers. Or I will exchange for supplies at a bargain.
13tfdb C. F. UHL, Millersburg, Ohio.

WANTED.—To exchange even Rose-comb Brown Leghorn cockerels, April hatch, standard birds, for Italian queens or comb foundation. Price \$1.00 here.
13d W. M. JAMES, Paris, Tenn.

LOOK HERE! To any one wishing to purchase nice Italian bees I will furnish them, during the month of July, for 50 cts. per pound. Tested queens, \$1.00 each; all queens reared from cells built under the swarming impulse. In all cases, cash must accompany order.
13-14 A. G. BRUSH, Susquehanna, Pa.

Black and Hybrid Queens For Sale.

For the benefit of friends who have black or hybrid queens which they want to dispose of, we will insert notices free of charge, as below. We do this because there is hardly value enough to these queens to pay for buying them up and keeping them in stock; and yet it is often times quite an accommodation to those who can not afford higher-priced ones.

I will sell 30 hybrid queens in July, at 25 cts. each. Insure safe delivery, and that queens are layers.
JOHN S. SARGENT, Hutton, Colos Co., Ill.

I can furnish some mismated queens at 50 cents apiece.
A. M. SAWDEY, Poolville, N. Y.

I have a few nice hybrids for 25c each, and a few rather small, untested and tested, for 10c. All are warranted to be good queens.
C. WECKESSER, Marshallville, O.

I have 10 good hybrid queens that I will sell for 25 cents apiece.
O. E. HEACOCK, Volusia, Fla.

Prolific hybrid queens for sale, at 40c each.
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I have about 50 Carniolan queens of last season's raising, fertilized by Italian drones, producing the gentlest bees and best honey-gatherers I have ever had, and a few of their daughters, untested, procured by natural swarming, which I will send by mail, and guarantee safe arrival, for 50 cts. each.
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13-15db JNO. NEBEL & SON, High Hill, Mo.

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Select tested queens, each,	- - - - -	\$1 50
Warranted queens,	- - - - -	75
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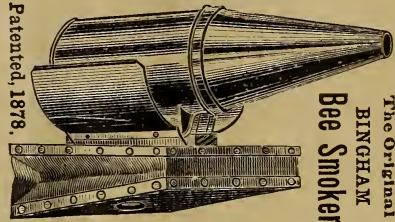
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